APPENDIX C. ADOPTED AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURES PROVIDED IN THE FINAL EIS/EIR

1. General Practices

LADWP has committed to the application of BRRTP General Practices (GPs) on a Project-wide basis. LADWP will incorporate these design features, measures, and procedures to avoid or reduce impacts from Project construction or operation. The GPs are considered a commitment by LADWP, and implementation of each GP will be monitored by the Lead Agencies. GPs that are integrated into Project construction and operations processes are listed in the table below.

TABLE 1-1. BRRTP GENERAL PRACTICES

General Practice	Description
	Plans
GP-1	Plan of Development & Construction, Operation and Maintenance Plans. In consultation with the Forest Service and BLM Authorizing Officers prior to construction, LADWP shall develop a Construction, Operation and Maintenance Plan (COM Plan) with the Forest Service and Plan of Development (POD) with BLM. These plans shall be attached to and become a part of the Special Use and Right-of-Way Authorizations. The COM Plan and POD shall include, at a minimum, road maintenance specifications, vegetation treatment and rehabilitation specifications, and conditions on maintenance and replacement of improvements. The agencies may combine the POD and COM plans into a single document for the Project.
GP-2	Traffic Control Plan. Prior to the start of construction, LADWP shall submit a Traffic Control Plan (TCP) to agencies with jurisdiction over public roads that would be directly affected by construction activities (where road closures or encroachments would be necessary). The Plan shall define the locations of all roads that would need to be temporarily closed due to construction activities, and also define the use of flag persons, warning signs, lights, barricades, cones, etc. for each construction closure. The plan shall include measures to avoid disruptions or delays in access for emergency service vehicles and to keep emergency service agencies informed of road closures, detours, and delays. Police departments, fire departments, ambulance services, and paramedic services shall be notified in advance of each closure by LADWP. The Plan shall also include contact information for those agencies, assign responsibility for notifying the service providers, and specify coordination procedures. Copies of the Plan shall be provided to all affected police departments, fire departments, ambulance and paramedic services.
GP-3	Hazardous Materials/Waste Management Plan. A project-specific hazardous materials management and hazardous waste management program will be developed prior to initiation of the project. The program will outline proper hazardous materials use, storage and disposal requirements as well as hazardous waste management procedures. The program will identify types of hazardous materials to be used during the project and the types of wastes that will be generated. All project personnel will be provided with project-specific training. This program will be developed to ensure that all hazardous materials and wastes were handled in a safe and environmentally sound manner. Hazardous wastes will be handled and disposed of according to applicable rules and regulations. Employees handling wastes will receive hazardous materials training and shall be trained in hazardous waste procedures, spill contingencies, waste minimization procedures and Treatment, Storage and Disposal Facility (TSDF) training in accordance with OSHA Hazard Communication Standard and 22 CCR. If degraded soil or groundwater is encountered during excavation (e.g., there is an obvious sheen, odor, or unnatural color to the soil or groundwater), it shall be excavated, tested, and disposed of in accordance with state hazardous waste disposal requirements. The Plan shall also include procedures detailing emergency responses to releases of hazardous materials. It will prescribe hazardous materials handling procedures for reducing the potential for a spill during construction, and will include an emergency response program to ensure quick and safe cleanup of accidental spills. All hazardous materials spills or threatened release, including petroleum products such as gasoline, diesel, and hydraulic fluid, regardless of the quantity spilled, will be immediately reported to the appropriate agency as outlined in the Plan if the spill has entered a navigable water, stream, lake, wetland, or storm drain, if the spill impacted any sensitive area including conservation areas and wildlife preserves, or if the spill caused injury to a person or threatens injury to public health. All construction personnel, including environmental monitors, will be aware of state and federal emergency response reporting guidelines.

General Practice	Description
GP-4	Health and Safety Plan. A Health and Safety Plan shall be prepared and implemented. The Plan shall address emergency medical services available on-site and within the project area. The Plan shall also address specific emergency response and evacuation measures.
GP-5	Stormwater Pollution Prevention Plan. A project-specific Construction Stormwater Pollution Prevention Plan (SWPPP) will be prepared and implemented prior to the start of construction. The SWPPP will utilize Best Management Practices (BMPs) to address the storage and handling of hazardous materials and sediment runoff during construction activities.
GP-6	Spill Prevention, Countermeasure, and Control Plan. LADWP will prepare or update existing Spill Prevention, Countermeasure, and Control Plan (SPCC Plan) for proposed and/or expanded switching stations if necessary or required by EPA guidelines. The plans will include engineered and operational methods for preventing, containing, and controlling potential fluid releases, and provisions for quick and safe cleanup.
GP-7	Soil Management Plan. A Soil Management Plan will be developed and implemented for construction of the proposed Project. The objective of the Soil Management Plan is to provide guidance for the proper handling, onsite management, and disposal of impacted soil that might be encountered during construction activities. The plan will include practices that are consistent with California Title 8, Occupational Safety and Health Administration (Cal-OSHA) regulations, as well as appropriate remediation standards that are protective of the planned use. The Plan will provide guidelines for identification of impacted soil, assessing impacted soil, soil excavation, impacted soil storage, verification sampling, and impacted soil characterization and disposal. In the event that potentially contaminated soils are encountered within the footprint of construction, soils will be tested and stockpiled. The appropriate Certified Unified Program Agency (CUPA) will determine whether further assessment is warranted.
GP-8	Avian Protection Plan. An Avian Protection Plan (APP) shall be developed and implemented for the construction and operation of the Project. The APP will outline measures and protocols that will be undertaken to protect avian species and is intended to protect local and migratory bird species that may occur within the Project area.
Design	
GP-9	A "dulled" metal finish shall be used on new towers or rebuilt portions of existing towers to reduce visual impacts except where otherwise dictated by visual mitigation measures.
GP-10	Nonspecular conductors shall be used to reduce visual impacts.
GP-11	Project features will be placed so as to avoid sensitive features including, but not limited to, riparian areas, water courses, and cultural sites, and/or to allow conductors to clearly span the features, within limits of standard tower design. This will minimize the amount of sensitive features disturbed and/or reduce visual contrast.
GP-12	Drainage control features will be installed, as appropriate, to minimize the amount of stormwater flow from areas of active construction. Details would be described in the SWPPP.
Construction Vehicles/Equipment	
GP-13	Only clean-burning on-road and off-road diesel engines shall be used. Where feasible, heavy-duty diesel powered construction equipment manufactured after 1996 (with federally mandated "clean" diesel engines) shall be used.
GP-14	Construction workers shall carpool to and from the construction site when possible.
GP-15	All trucks hauling soils or other loose materials shall be covered, or maintain at least two feet of freeboard (distance between the material and the top of the truck).
GP-16	Where visible soil material is carried onto adjacent public streets, the affected streets shall be cleaned daily with water sweepers.
GP-17	All vehicles and equipment operating within 100 feet of an active stream will be inspected daily to ensure they are free of any leaks of fuel, cooling, or lubricating fluids.
GP-18	All construction vehicles shall maintain a hazardous materials spill kit, which shall include absorbent materials, tarps, small storage containers or waterproof bags, and latex gloves. Field personnel shall be made aware of these kits and instructed on how to use them.

General Practice	Description
GP-19	Refueling, or addition or changing of oil and other fluids for equipment and heavy machinery shall be performed only at approved staging and construction yards. Staging and construction yards will be located on upland sites and spill containment measures will be used to minimize risk of spill or drainage into waterways. Oil and other fluids will be disposed of as required by California law. Emergency refueling, or emergency addition or changing of oil or other fluids shall not be performed within 500 feet of natural stream channels or wetlands.
GP-20	Helicopters utilized for construction will be refueled at helicopter staging areas or local airports. Procedures will include the use of drop cloths made of plastic and drip pans and trays to be placed under refilling areas to ensure that chemicals do not come into contact with the ground. Refueling areas will be located in designated areas where absorbent pads and trays are available.
GP-21	LADWP shall contact Angeles National Forest (ANF) dispatch seven days prior to helicopter use and shall provide ANF with radio frequencies being used by the aircraft, aircraft identifiers, the number of helicopters that will be used while working on National Forest System (NFS) lands at any given time, and the flight pattern of helicopters used on NFS lands. If a wildfire occurs in the Project area, upon contact from the Forest Aviation Officer, helicopters in use by LADWP shall immediately cease construction activities and not restart aerial operations until the Forest Aviation Officer provides clearance.
GP-22	The Applicant shall clear brush and dead and decaying vegetation that would pose a fire hazard from the work area prior to starting construction and/or maintenance work. The work area includes areas of construction (e.g., tower sites, switching station site) within the transmission ROW, construction laydown areas, pull sites, access roads, parking pads, and any other sites adjacent to the ROW where personnel are active or where equipment is in use or stored. Cleared vegetation shall either be removed or chipped and spread onsite in piles no higher than six inches. This will be determined in consultation with individual appropriate land management agencies.
Access Roads	
GP-23	The alignment of any new access roads or overland routes shall follow the designated area's landform contours where possible, providing that such alignment does not additionally impact resource values.
GP-24	To the extent practical, any re-grading of access roads shall be the minimum necessary to provide safe access of construction equipment, and erosion control measures.
GP-25	Construction vehicles shall use paved roads to access the construction site when available.
GP-26	The design and use of roadways or access trails within the ANF shall be coordinated with the District and Forest Supervisor's office. The ANF may specify conditions under which use of the Forest system roads and lands shall be permitted. These conditions may include restoring or blocking access at some service trails and repairing any roadway damage or erosion damage caused by construction activities or traffic. Any project-related damage to existing Forest system roads shall be repaired at LADWP's cost.
GP-27	Any construction or installation work requiring the crossing of a roadway or railway right-of-way would incorporate the use of guard poles, netting, or similar means to protect moving traffic and structures from the activity. If necessary on state highways, continuous traffic breaks would be planned and provided.
GP-28	To minimize traffic congestion and delays during construction to the extent feasible, LADWP shall restrict all necessary lane closures or obstructions on major roadways associated with Project construction activities to off-peak periods, as feasible. Lane closures should be avoided during the 6:00 a.m. to 9:00 a.m. timeframe and the 3:30 p.m. to 6:30 p.m. timeframe, or as otherwise defined within the TCPs.
GP-29	Where Project construction and/or maintenance access could close one or multiple lanes, and where significant degradations in roadway operations could result, roadway diversions should be provided to restore the travel lanes through temporary roadway restriping.
GP-30	Where Project construction and/or maintenance access could close bicycle lanes or trails, temporary diversions should be provided where feasible to provide continued access around the construction or maintenance area.
GP-31	Where Project construction and/or maintenance access could cut-off access to nearby recreation areas, and where no alternate route exists to the recreation areas, measures should be used to provide a minimum of one lane reversible access (with flagmen) through the construction/maintenance area, or work should only be conducted during off-peak hours or evening hours only.
GP-32	Any damage to local paved roadways caused by Project construction and/or maintenance shall be repaired and the roadways shall be restored to their previous condition.

General Practice	Description
GP-33	In areas where soils and vegetation are particularly sensitive to disturbance, existing access roads would be repaired only in areas where they are otherwise impassable or unsafe.
	Construction Areas
GP-34	Construction activities shall be limited to the designated right-of-way and approved access and work areas as identified in the ROD and POD. Any deviations from the approved areas must be cleared with the jurisdictional agency and/or landowner.
GP-35	Grading areas shall be clearly marked and no equipment or vehicles shall disturb slopes or drainages outside of the grading area.
GP-36	No paint or permanent discoloring agents will be applied to rocks or vegetation to indicate survey or construction activity limits.
GP-37	In construction areas (e.g., marshalling yards, tower sites, spur roads from existing access roads) where ground disturbance is significant or where recontouring is required, surface restoration shall occur as required by the landowner or land management agency. The method of restoration will normally consist of returning disturbed areas back to their natural contour, reseeding, installing cross drains for erosion control as necessary, placing water bars in the road as necessary, and filling ditches.
GP-38	Soil excavated from construction activities shall not be left at work areas where the slopes exceed 10 percent or where the work area is within 100 feet of a natural stream or waterbody (receiving water). In these situations, loose soil shall be used elsewhere within the immediate area or stockpiled at the staging area. Stockpiled soil shall be managed as required by the SWPPP. No stockpiling or spreading of soil or other materials shall occur within stream channels.
GP-39	During grading or excavation work for the Project, the contractor shall observe the exposed soil for visual evidence of contamination. If visual contamination indicators are observed during construction, the contractor shall stop work until the material is properly characterized and appropriate measures are taken to protect human health and the environment. The contractor shall document the exact location of the contamination and shall immediately notify a designated Environmental Monitor and propose actions for addressing the contamination in accordance with the Soil Management Plan.
GP-40	Existing watering facilities (e.g., tanks, developed springs, water lines, wells, etc.) will be repaired or replaced, if they are damaged or destroyed by construction activities, to their pre-disturbed condition as required by the landowner or land management agency.
GP-41	Allow natural vegetation to reoccur on temporarily disturbed areas following the completion of construction.
GP-42	Weed control measures on non-federal lands shall be implemented as determined in consultation with CDFG and the Counties of Los Angeles and Kern Agricultural Commissions.
GP-43	Every effort will be made to minimize vegetation removal and permanent loss at construction sites. Native vegetation will be flagged for protection or stockpiled for recontouring use at the discretion of the Biological Monitor and the Construction Supervisor.
GP-44	In construction areas where recontouring is not required, vegetation will be left in place wherever possible and the original contour will be maintained to avoid excessive root damage and allow for resprouting. Disturbance will be limited to overland driving where feasible to minimize changes in the original contours.
GP-45	Use of heavy equipment within a flowing channel will be avoided if possible; however, should it be necessary, the Environmental Monitor will be notified prior to initiation of construction activities to allow adequate time for site visits and surveys, if necessary.
GP-46	Asphalt or cement equipment will not be rinsed in, nor excess products deposited into any stream or other waterway. Asphalt or concrete effluent will not be allowed to enter into stream or RCA. Effluent will be removed from standing water and prevented from entering a waterway.
GP-47	Fill material, including brush, loose soils, and other similar debris will not be deposited within a stream channel or on a stream bank.

General Practice	Description
	Surveys/Monitoring
GP-48	Biological Monitor. For areas identified as environmentally sensitive, such as streams, wetlands, riparian areas, and other environmentally sensitive areas, a biological monitor shall be present during ground disturbing construction activities. The qualified biologist shall conduct monitoring for any area subject to disturbance from construction activities that may impact biological resources. The biological monitor's duties include minimizing impacts to special-status species, native vegetation, wildlife habitat, and unique resources, as well as to identify potential issues or impacts to biological resources and report those to the authorized biologist. Where appropriate, the monitor will flag the boundaries of biologically sensitive areas and monitor any construction activities in these areas to ensure that ground disturbance activities and impacts occur within designated limits.
GP-49	Worker Environmental Awareness Program. A Worker Environmental Awareness Program (WEAP) will be implemented to educate all construction personnel of the area's environmental conditions and the environmental protection measures that must be adhered to. An environmental training program will be established to communicate environmental concerns and appropriate work practices, including spill prevention, emergency response measures, protection of biological and cultural resources, and proper Best Management Practice (BMP) implementation, to all construction and maintenance personnel.
	Coordination/Permits
GP-50	Prior to construction, LADWP shall consult with all federal, state, and local agencies, including local agency consortiums, having jurisdiction over lands affected by the proposed Project's ROW and ancillary facilities to ensure that no permanent restrictions or preclusions of their land management practices occur.
GP-51	Construction activities shall be designed to minimize work on or use of local streets. In the event that local streets must be used for more than normal traffic purposes, an encroachment permit or similar authorization shall be obtained from the County (or other agency, as applicable). Any work requiring an encroachment permit shall include preparation of a traffic control plan or other management plan to minimize effects on local streets. Any damage to local streets will be repaired, and the street system will be restored.
GP-52	Consistent with Los Angeles County Code (Section 12.08.440), no construction activities shall occur in a residential area between 7:00 p.m. and 7:00 a.m. on weekdays and Saturdays, or at any time on Sundays or holidays. In the event that construction needs to occur outside the specified hours, a variance shall be obtained beforehand.
GP-53	Incorporate riparian area avoidance and permit measures. The following actions and all permit conditions detailed within the individual or Nationwide 404 permit and RWQCB 401 water quality certification (subject to separate approval) would be implemented by the construction manager and environmental compliance monitor(s). Before construction, qualified resource specialists would stake and flag or fence exclusion zones around all identified riparian areas. Such exclusion zones would include a 10-foot buffer to preclude sediment intrusion into the riparian areas. Earth-moving activities would be restricted from these zones, although essential vehicle operation and foot travel would be permitted on existing roads, bridges, and crossings. All other construction activities, vehicle operation, material and equipment storage, and other surface-disturbing activities would be prohibited within the exclusion zone. In areas where riparian habitats are unavoidable, the construction manager in consultation with the lead environmental compliance inspector would narrow the width of the centerline to the maximum extent allowable. New spur roads and existing access road improvements would be constructed and implemented using methodology that preserves existing hydrology. Tower pad clearance would be minimized to the maximum extent allowable. All temporarily disturbed riparian areas that would not be utilized for future routine operation and maintenance activities would be restored to ensure no net loss of habitat functions and values. Following construction activities, the areas would be restored as soon as practicable.
GP-54	Construction crews will avoid impacting the streambeds and banks of any streams along the route to the extent feasible. When construction or maintenance work affects the bed, bank or margins of a stream under CDFG jurisdiction, LADWP will notify CDFG as required under Fish and Game Code Section 1602, which may include securing a Streambed Alteration Agreement.
GP-55	Local emergency service providers shall be coordinated with to ensure that construction activity and any associated lane closures or traffic impacts will not significantly affect emergency response vehicles.
GP-56	LADWP would obtain appropriate Tree Removal Permits when necessary from the appropriate government agencies. In accordance with the obtained permits, LADWP shall avoid or minimize impacts to protected trees.

General Practice	Description
GP-57	LADWP shall obtain permits/approvals from any affected railway operators to ensure construction activities comply with each company's safety requirements and to avoid disruption to or congestion of rail traffic.
GP-58	LADWP shall coordinate with the City of Santa Clarita at least 30 days prior to construction in the service territory to reduce the potential interruption of bus transit services.
GP-59	All residences adjacent to the project area shall be notified at least seven days in advance of local construction of the construction schedule and the type and expected duration of local impacts, including air quality and noise impacts. The notice shall also include a phone number for construction noise questions.
Noise	
GP-60	Noise reduction features (e.g., mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer shall be used on construction equipment.
GP-61	Temporary sound walls or acoustic blankets around stationary noise sources (e.g., generators, pumps) shall be installed to shield adjacent sensitive receptors. Where feasible, these sound walls or acoustic blankets shall have a height of no less than eight feet, a Sound Transmission Class (STC) of 27 or greater, and a surface with a solid face from top to bottom without any openings or cutouts.
GP-62	Unnecessary construction vehicle idling time shall be minimized (see also Mitigation Measure AIR-2D, Restrict diesel engine idling to 5 minutes). The ability to limit construction vehicle idling time is dependent upon the sequence of construction activities and when and where vehicles are needed or staged. A "common sense" approach to vehicle use shall be applied; if a vehicle is not required for use immediately or continuously for construction activities, its engine shall be shut off. It should be noted that certain equipment, such as large diesel-powered vehicles, shall require extended idling for warm-up and repetitive construction tasks and would therefore not be subject to being shut off when not in use.

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2. Adopted Mitigation Measures

Number	Final EIS/EIR Mitigation Measure	Adopted - Yes/Modified	Modified Mitigation Measure
Air Quality and Climate Change			
AIR-2a	*Implement Construction Fugitive Dust Control Plan.* The construction contractor shall develop a Fugitive Dust Emission Control Plan for construction work. Measures to be incorporated into the plan include, but are not limited to, the following where practical: • Water the disturbed areas of the active construction sites in sufficient quantities to prevent the generation of visible dust plumes. Watering may not be required in wet weather. Soil binders may be used in lieu of watering where soil binders are appropriate and prevent the generation of visible dust plumes. • Enclose, cover, or apply water a minimum of twice daily to exposed piles with a five percent or greater silt content. • ARB-certified and agency-approved (on federal lands) non-toxic soil binders shall be applied per manufacturer recommendations to active unpaved roadways, unpaved staging areas, and unpaved parking area(s) throughout construction (as allowed by responsible agencies such as the USFS and BLM) to reduce fugitive dust emissions. Other watering products, selected from lists available from the Environmental Protection Agency's (EPA's) Environmental Technology Verification program or the SCAQMD, may be applied per manufacturer recommendations in place of the ARB-certified soil binders if such products can be reasonably demonstrated to be as effective as the ARB-certified non-toxic soil binders and be approved by the affected federal agency. • Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8-hour work day]; OR Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour. Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface, to reduce fugitive dust emissions. • All vehicle tires shall be inspected, are to be free of dirt, and washed as necessary before entering paved roadways. In lieu of washing vehicle tires, the construction contractor may sweep roads on a regular basis or employ similar methods to reduce dust track-out. • Install wheel washers or wash the wheels of trucks and other heavy equipment where vehicles exit unpaved areas. • Cover all trucks hauling soil and other loose material, or require at least two feet of freeboard. • Establish a vegetative ground cover (in compliance with biological resources impact mitigation measures) as appropriate or otherwise create stabilized surfaces on all unpaved areas at each of the construction sites after active construction operations have ceased. • Increase the frequency of watering unpaved surfaces under active construction to more than three times daily, or implement other additional fugitive dust mitigation measures, to all active disturbed fugitive dust emission sources as required by SCAQMD Rule 403 before wind events.) • Travel routes to each construction site shall be developed to minimize unpaved road travel. • Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative where appropriate at active and inactive sites during workdays, weekends, holidays, and windy conditions. • Install wind fencing and phase grading operations where appropriate, and operate water trucks for stabilization of surfaces under windy conditions. • Prevent spillage when hauling loose material by limiting speeds to 15 miles per hour. Limit speed of earth-moving equipment to 10 miles per hour.	Yes	
AIR-2b	Properly Maintain Mechanical Equipment. The construction contractor shall ensure that all mechanical equipment associated with Project construction is properly tuned and maintained in accordance with the manufacturer's specifications to the extent feasible, and is maintained to perform at CARB and/or EPA certification levels. The construction contractor shall prevent tampering with equipment. This measure will be verified by LADWP through unscheduled inspections.	Yes	
AIR-2c	Use Ultra Low-sulfur Diesel Fuel. ARB-certified ultra low-sulfur diesel (ULSD) fuel containing 15 ppm sulfur or less shall be used in all diesel-powered construction equipment to the extent feasible.	Yes	

Number	Final EIS/EIR Mitigation Measure	Adopted - Yes/Modified	Modified Mitigation Measure
AIR-2d	Restrict Diesel Engine Idling to Five Minutes. In accordance with LADWP's Environmental Affairs Bulletin 2007-05 dated March 12, 2007, and in accordance with the requirements of the ARB's idling regulations, vehicles with a gross vehicle weight rating (GVWR) of greater than 10,000 pounds "shall not idle the vehicle's primary diesel engine for greater than five minutes at any location." This measure will be verified by LADWP through unscheduled inspections. The five-minute idling limit does not apply for the period during which: • Idling must occur due to traffic conditions. • Idling when the vehicle is queuing that at all times is more than 100 feet from any real property zoned for individual or multifamily housing units that has one or more such units on it. • Idling when forced to remain motionless due to immediate adverse weather conditions. • Idling to verify that the vehicle is in safe operating condition. • Idling is required for mandatory resting, servicing, repairing, or diagnostic purposes. • Idling when positioning or providing a power source for equipment or operations other than transporting passengers or propulsion. • Idling while operating defrosters, heaters, air conditioners, or other equipment solely to prevent a safety or health emergency.	Yes	
AIR-2f	Off-road Diesel-fueled Equipment Standards. During project construction, all internal combustion engines/construction equipment operating on the project site shall meet EPA-Certified Tier 2 emissions standards, or higher according to the following: • January 1, 2012 to December 31, 2014: all offroad diesel-powered construction equipment greater than 50 hp shall meet Tier 3 offroad emissions standards. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. • Post-January 1, 2015: All offroad diesel-powered construction equipment greater than 50 hp shall meet the Tier 4 emission standards, where available. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. • A copy of each unit's certified tier specification, BACT documentation, and CARB or SCAQMD operating permit shall be provided at the time of mobilization of each applicable unit of equipment. • Encourage construction contractors to apply for AQMD "SOON" funds. Incentives will be provided for those construction contractors who apply for AQMD "SOON" funds. The "SOON" program provides funds to accelerate clean up of offroad diesel vehicles, such as heavy duty construction equipment. • Alternative fuels such as natural gas and electricity shall be used where available and feasible. This measure will be implemented through development of administrative controls, including: • Prepare an inventory of all equipment prior to construction and identify the suitability of add-on emission controls for each piece of equipment before groundbreaking; • Develop a construction traffic and parking management plan that maintains traffic flow and plan construction to minimize vehicle trips; and • Identify sensitive receptors in the project area, such as children, elderly, and infirmed, and specify the means by which the construction contractor will minimize impacts to these populations (e.g., locate construction equipment and staging zones away from sensitive receptors and building air intakes). • Provide advanced notification to sensitive receptors of the potential effects of PM_{10} and $PM_{2.5}$, as well as toxic air contaminants, prior to construction.	Yes	
AIR-2h	Off-road Gasoline-fueled Equipment Standards. All off-road stationary and portable gasoline powered equipment shall have EPA Phase 1/Phase 2 compliant engines, where the specific engine requirement shall be based on the new engine standard in effect two years before initiating Project construction.	Yes	
AIR-4a	General Conformity Offset Mitigation. If the final emission estimate for the selected Project Alternative as provided in the Project's Conformity Analysis exceeds the NOx and/or VOC emission applicability thresholds, and assuming the SCAQMD does not provide confirmation that the Project's emissions are accounted for in the State Implementation Plan (SIP) emission estimates per 40 CFR 93.158(a)(1), then the Project will obtain emission reduction credits to fully offset the NOx and/or VOC emissions per 40 CFR 93.158(a)(2) for the years that the Project has been estimated to exceed the NOx and/or VOC emission applicability thresholds. Credits shall be submitted to the BLM and USFS for review and approval.	Yes	

		Adopted - Yes/Modified	Modified Mitigation Measure
Recreation			
R-1a	Coordinate construction schedule and maintenance activities with managing officer(s) for affected recreation areas. LADWP shall develop a Project construction schedule and coordinate construction with the authorized officer(s) or the agencies of recreational areas affected by construction and maintenance activities, including but not limited to the following: BLM, USFS (ANF); California Department of Fish and Game (CDFG); Pacific Crest Trail Association (PCTA); California State Park and Recreation Commission; California Department of Parks and Recreation; Kern County Department of Parks and Recreation; Castaic Lake Water Agency (CLWA); Mountains Recreation & Conservation Authority (MRCA); and Los Angeles County Department of Parks and Recreation. Through coordination efforts with the agencies listed above, as well as any additional agencies that manage recreational resources which would be affected, and at the discretion of the authorized officer(s) responsible for management of the affected resource(s), LADWP shall ensure the following occurs, to the extent practical, unless otherwise approved by the affected agencies: • Construction and maintenance activities are scheduled to avoid heavy recreational use periods (including major holidays); • Staging areas for Project-related equipment, materials, and vehicles are in areas with the least possible effect on recreational activities and opportunities; • Timetables for the required period of usage of each staging area are developed and adhered to in coordination with affected resource agencies.	Yes	
R-1d	Notification of temporary closure and reroute of the Pacific Crest National Trail and/or other trails. LADWP shall coordinate with the BLM, USFS, PCTA, and other agencies or organization(s) regarding temporary closure of trails that would occur during Project construction and maintenance activities. The following shall be included in this coordination effort to the extent feasible: • Identification of trail diversions to be applied at each point where trails would be temporarily closed to through-traffic as a result of construction and maintenance activities; and • Posting of public notices of temporary closures/diversions at locations determined to be appropriate by the agency or organization during construction and maintenance activities.	Yes	
Hazardous Materials			
HAZ-2	Document compliance with measures for encountering unknown contamination. If evidence of soil or groundwater contamination is detectable by visual and/or olfactory observation during Project construction, a report documenting the exact contamination location, laboratory test results, actions taken, and recommended mitigation (if applicable) shall be submitted to the USFS (if on USFS lands) or BLM (if on BLM lands) for each incident. This report shall be submitted within 30 days of LADWP's receipt of laboratory results.	Yes	
HAZ-4	Herbicide Application Protocols. Protocol 1- Selection of Project Herbicides: • Herbicides would be selected from an LADWP- and USFS-approved list, with mixture and dilution ratios that have been specified by the manufacturer. Protocol 2- Contract Qualified Personnel for Herbicide Application: • Individuals selected for herbicide application must possess all appropriate State and local herbicide applicator licenses, and documented training complying with applicable regulations and ordinances. • Supervisory personnel must be familiar with the application areas and must be present to monitor herbicide application in these areas. • Contractors applying herbicides must follow all applicable regulations regarding herbicide use. Protocol 3a- Field Preparation Procedures: • Contractors shall follow all specifications/recommendations provided by the manufacturer for mixing and application of herbicides. Only the minimum amount of chemicals required to adequately complete the job shall be mixed. • Herbicide chemical mixing and vehicle loading must be conducted before entering the field, and all vehicles shall contain Hazardous Materials Spill Management Kits.	Yes	

Number	Final EIS/EIR Mitigation Measure	Adopted - Yes/Modified	Modified Mitigation Measure
	• Calibrate and inspect all spray equipment before entering the field to maintain adequate functionality. • Distribute safety equipment, information, and emergency supplies to the application crew, including splash protection clothing and gear, chemical resistant gloves, chemical spill/splash wash supplies, and Materials Safety Data Sheets (MSDS), for all materials to be used on the job. Protocol 3b- In-Field Preliminary Procedures: • Before each herbicide application, the local weather conditions and the physical and climatic setting of the target area must be evaluated. • Before herbicide application, mechanically remove appropriate vegetation at the target sites, as applicable. Minimize unnecessary environmental disturbance by preparing the work area at target sites. Protocol 3c- Application Restrictions: • Avoid contact with areas frequently occupied by humans and domestic animals and/or their food sources (i.e., yards, pens, food crops, drinking water, feed storage areas). • Protect wildlife and valued vegetation from direct contact with herbicides. Only chemicals that are non-toxic to birds and small mammals shall be applied in areas where nests or dens are observed. • Protect aquatic wildlife from chemical runoff. Avoid spraying within 50 feet of well heads. Avoid spraying near roadside drainage channels or within 50 feet of any surface water body when water present. • Avoid application under the following conditions to avoid chemical drift and contamination outside the target sites: Under conditions of rain or when rain is imminent, during site irrigation, when the target site contains puddles, when the site has a slope that exceeds a 1:1 ratio. • Avoid chemical drift outside of target sites by avoiding application during wind velocities in excess of 10 mph. If chemical drift is observed during application, discontinue spraying until conditions causing the drift stop. Protocol 3d- In-Field Application Procedures: • Complete preliminary site evaluation checks to record adverse conditions identified in the field. Avoid application in those areas. • Do not dump excess pesticide onto soil or into drains. Do not dump or scatter vegetation waste into drainage canals or surface water bodies. Avoid fueling of maintenance vehicles/equipment within 100 feet of water bodies. • Apply the minimum amount of chemicals necessary to complete the objective at the site. Minimize overlapping previously sprayed areas. Protocol 4- Post-Application Protocols: • Spray tanks shall be cleaned at the Project staging yards and shall be appropriately reused. Excess herbicide and containers shall be stored and disposed of according to the manufacturer's label by the construction contractor. After application, a record of herbicide application performed at each target site shall be provided by the contractor to LADWP, the USFS, and the BLM, as appropriate. Protocol 5- Spill Clean-up Procedures: • Immediately after a spill incident, absorbent material shall be applied. Affected media shall then be placed into a hazardous material storage container, and LADWP would be notified. • If wildlife nests or dens are accidentally sprayed, personnel shall immediately notify their supervisor, who shall report the incident to LADWP within 24 hours.		
Visual Resources			
VIS-2	Feathered Vegetation Clearing - Where vegetative clearing is necessary, to the greatest extent possible, clearing edges shall be tapered and feathered to reduce the visual impact.	Yes	
VIS-3	Existing Access Road Widening or Upgrades - To the greatest extent possible, LADWP shall use existing and already maintained access roads and spur roads to perform project construction. Where erosion potential has been identified as severe or very severe in the visual contrast analysis, no widening or upgrading of existing access roads shall be undertaken in the area of construction and operation, except for repairs necessary to make roads passable and where the USFS has approved plans submitted by LADWP before construction.	Yes	
VIS-5	Clean Up Construction Related Areas - LADWP shall keep construction-related operations areas clean and tidy by storing building materials and equipment within the proposed construction staging areas and/or generally away from public view when feasible. LADWP shall remove construction debris, including temporary fencing when no longer needed, promptly and at regular intervals. For ANF lands, in areas where cleared vegetation would be visible from sensitive viewing locations, LADWP shall dispose of cleared vegetation and woody material off-site (not necessarily off-ANF land), or chip and store for restoration work, as approved by the USFS, in a manner that is not visually evident and does not create visual contrasts.	Yes	

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VIS-6	Construction Site Clean Up and Restoration - When the construction period is over, construction sites shall be cleaned up and their surfaces shall be restored as closely as possible to pre-construction conditions.	Yes	
VIS-7	Fence Screening - All temporary chain-link fencing installed during the construction process shall be covered with screening fabric or slats and shall be maintained in good working condition until the fence is removed. This process will help provide screening from construction activities, equipment and materials. The fabric/slat colors shall be selected based on what best blends in to the immediate surroundings of where they are being used.	Yes	
VIS-8	Reduce Glare and Light Spill - Where applicable, the lighting specified during the implementation of this Project shall be the minimum required to meet safety and security standards. All light fixtures shall be hooded to eliminate any potential for glare effects and to prevent light from spilling off the site or up into the sky. In addition, the fixtures shall have sensors or switches to permit the lighting to be turned off at times when not required.	Yes	
VIS-12	Minimize Vegetation Clearing - To the extent practical, LADWP shall keep modifications of the natural settings to what is minimally required for safe, efficient construction, operation, and maintenance of the Project. Areas that are cleared/opened solely for safe access during the construction stage and that exceed the need for permanent future access into the site shall be restored to the greatest extent possible.	Yes	
VIS-15	Construction Area Site Selection - To the extent feasible, the sites selected for use as construction yards, pull sites, helicopter landing zones, laydown areas, etc., shall be areas that are already flat, disturbed, and/or clear of vegetation, which would require the least amount of modification, clearing, and soil disturbance. To the extent feasible, these construction features shall be in areas of low visual sensitivity.	Yes	
VIS-17	Span Matching of Existing Structures – To the extent practicable and within the limits of standard structure design, LADWP shall match existing structure spacing, spans and heights as closely as possible to reduce visual complexity as seen from high concern viewpoints.	Yes	
Cultural Resources			
CUL-1	To avoid or reduce impacts to cultural resources on federal, State, city and private land, the ANF, BLM, California SHPO, and LADWP will develop and implement a Programmatic Agreement (PA) to comply with Section 106 of the NHPA, in accordance with the implementing regulations at 36 CFR 800.14(b). As stipulated in 36 CFR 800.14(b), the PA will document the alternate procedures and guidelines to resolve potential adverse effects or impacts that may result from the construction, operation, and maintenance of the BRRTP. The development of the PA will involve the appropriate government-to-government consultations pursuant to 36 CFR 800.16(f)(1) and invite participation by interested groups, organizations, and individuals, per 36 CFR 800.16(e)(2). The PA will require a Construction Phase Management Plan (CPMP) and a Historic Properties/Historical Resources Management Plan (HP/HRMP). Provisions of the CPMP will be implemented before and during construction; provisions of the HP/HRMP will be implemented following construction during operation and maintenance of the BRRTP. The PA will be signed by the signatories and invited signatories before issuance of the Record of Decision (ROD) by the ANF and BLM.	Yes	
Wildfire and Fuels			
F-1a	Eliminate Transmission Line Bounded Islands. LADWP shall eliminate the transmission line bounded islands, as feasible within the limits of standard transmission line design, that would be created by the proposed transmission line along Alternative 1, Alternative 2, and Alternative 2a where the new line departs and remerges with the existing transmission line corridors. Specifically, this would apply to Alternative 1 between mile markers 52.2 and 52.7 and 55.2 and 55.7; Alternative 2 between mile markers 55.0 and 55.7; and Alternative 2a between mile markers 55.0 and 55.6.	Yes	
F-1b	Remove the Potential for Wooden Pole Contact. Within the limits of standard transmission line design, the Project should be constructed to avoid potential conflict of existing wooden poles from either conductor contact or from the placement of the new transmission structures. If avoidance of the wooden poles is not possible through design of the Project, then LADWP would coordinate with the responsible utility to rebuild as steel poles or relocate the wooden poles to meet standard avoidance practice. Potential wooden pole contact exists along Alternative 1 between mile markers 52.2 and 53.4, Alternative 2 between mile markers 52.7 and 54.7, Alternative 2a between mile markers 52.7 and 54.7, Alternative 3 between mile markers 41.0 and 53.9, and along the reconductoring of the existing BR-RIN 230 kV transmission line in the same mile marker locations of the new line listed above under Alternative 2.	Yes	

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F-1e	Coordinate During Emergency Fire Suppression Activities. In the event of a fire within the Project area, LADWP would coordinate construction activities with fire agencies to avoid obstructions to firefighting activities. The following provisions shall be defined based on consultation with fire agencies. Onsite LADWP and contracted personnel shall coordinate fire suppression activities through the active Fire Incident Commander, and emergency ingress and egress to construction-related access roads shall remain unobstructed at all times during active firefighting activities. Construction in the work area shall cease in the event of a fire within 1,000 feet of the work area or a distance deemed to be unsafe for construction crews. The work area includes the transmission ROW, construction laydown areas, pull sites, access roads, parking pads, and any other sites adjacent to the ROW where personnel are active or where equipment is in use or stored. LADWP shall contact cooperating fire agency dispatches seven days before helicopter use and shall provide dispatch centers with radio frequencies being used by the aircraft, aircraft identifiers, the number of helicopters that would be used while working on or near CAL FIRE Contract County and ANF lands at any given time, and the flight pattern of helicopters to be used. Should a wildfire occur within five (5) miles of the work area, if instructed by the Incident Commander and/or Forest Aviation Officer, construction-related helicopters in use by LADWP shall immediately cease construction activities and not restart aerial operations until authorized by the appropriate fire agency.	Yes	
F-2a	Develop and Implement a Construction and Maintenance Fire Prevention Plan. LADWP shall coordinate, develop and implement a Fire Prevention and Vegetation Management Plan, which may be incorporated into the overall COM Plan, to cover construction and maintenance activities associated with the Project. The Plan would include monitoring activities during construction to ensure implementation and effectiveness of the Plan. The Plan would be applicable to the entirety of the Proposed Action or Alternative during all construction and maintenance activities. The Plan will be developed in coordination with USFS and BLM, with input from the CAL FIRE Contract County. The plan will be approved by the Forest Service and BLM prior the start of any construction activities. At a minimum, Plan contents shall include the requirements of ANF Fire Management Plan and Title 14 of the California Code of Regulations, Article 8 #918 "Fire Protection." Based on these requirements, the plan will include procedures for reporting fires, minimum fire suppression equipment requirements, communication, construction restrictions based on fire conditions, fire patrols, and fire suppression water supplies.	Yes	
F-2b	Cease Work During Red Flag Conditions. During Red Flag Warning events, as issued daily by the National Weather Service and the Los Angeles County Fire Department in Federal Responsibility Areas (FRAs) and Local Responsibility Areas (LRAs), all non-emergency construction and maintenance activities shall cease in affected areas. An exception shall be made for transmission line testing where a transmission line may be tested if the loss of another transmission facility could lead to system instability or cascading outages.	Yes	
F-2c	Remove Hazards from the Work Areas. Before starting construction and/or maintenance work on the Project, LADWP shall clear or remove brush and dead and decaying vegetation that would pose a fire hazard from the work area. The work area includes the transmission ROW, construction laydown areas, pull sites, access roads, parking pads, remote helicopter construction sites, helicopter fueling/maintenance sites and any other sites adjacent to the ROW where personnel are active or where equipment is in use or stored. For ground-based construction, cleared vegetation may either be removed or chipped and spread onsite in piles no higher than six (6) inches.	Yes	
Biological Resources			
BIO-1	*Provide restoration/compensation for impacted sensitive vegetation communities.* 1a The intent of this mitigation measure is to require LADWP to restore disturbed sites to pre-construction conditions or the desired future conditions per the Angeles National Forest (ANF) Land Management Plan (LMP). Before construction LADWP shall have a qualified biologist, where concurrence on the biologist has been provided by the USFS and approval on the biologist has been provided by the BLM, document the community type and acreage of vegetation that would be subject to Project disturbance. Impacts to all oaks and native trees will be documented by identifying the species, number, location, and diameter at breast height (DBH). On non-federal lands, all protection and replacement measures shall be consistent with applicable local jurisdiction requirements, such as the Los Angeles County Oak Tree Ordinance. 1) For NFS and BLM lands, the USFS and BLM shall review and approve a Habitat Restoration and Revegetation Plan, prepared by LADWP in coordination with the federal agencies, for the Project, which shall include plans for restoration, enhancement/re-vegetation and/or mitigation banking. For non-federal lands, LADWP shall prepare the Habitat Restoration and Revegetation Plan. Both plans shall include at minimum: (a) the location of the mitigation site (off-site mitigation may be required); (b) locations and details for topsoil storage; (c) the plant species to be used; (d) seed and cutting collecting guidelines; (d) a schematic depicting the mitigation area; (e) time of year that	Modified for consistency with the Final Biological Assessment as submitted to USFWS	*Provide restoration/compensation for impacted sensitive vegetation communities.* 1a. The intent of this mitigation measure is to require LADWP to restore disturbed sites to pre-construction conditions or the desired future conditions per the Angeles National Forest (ANF) Land Management Plan (LMP). Before construction LADWP shall have a qualified biologist, where concurrence on the biologist has been provided by the USFS and BLM, document the community type and acreage of vegetation that would be subject to Project disturbance. Impacts to all oaks and native trees will be documented by identifying the species, number, location, and diameter at breast height (DBH). On non-federal lands, all protection and replacement measures shall be consistent with applicable local jurisdiction requirements, such as the Los Angeles County Oak Tree Ordinance. Tree removal shall not be permitted until replacement trees have been planted or transplanting sites are approved. 1) For NFS and BLM lands, the USFS and BLM shall prepare a Habitat Restoration and Revegetation Plan, in discussion with LADWP, for the Project, which shall include plans for restoration, enhancement/re-vegetation and/or mitigation banking. For non-federal lands, LADWP shall prepare the Habitat Restoration and Revegetation Plan. Both plans shall include at minimum: (a) the location of the mitigation site (off-site mitigation may be required); (b) locations and details for topsoil storage; (c) the plant species to be used; (d) seed and cutting collecting guidelines; (d) a schematic depicting the mitigation area; (e) time of year that the planting will occur and the methodology of the

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	the planting will occur and the methodology of the planting; (f) a description of the irrigation methodology for container, bare-root or other planting needing irrigation; (g) measures to control exotic vegetation on site; (h) success criteria; (i) a detailed monitoring program;(j) locations and impacts to all oaks and native trees (over 3 inches DBH); (k) locations of temporary or permanent gates, barricades, law enforcement patrolling, or other means to control unauthorized vehicle access on access and spur roads as deemed necessary by the USFS and BLM (NFS and BLM lands only). Restoration efforts will not adversely affect listed species or critical habitat and measures will be implemented to protect these species during restoration. 2) LADWP shall utilize a USFS/BLM approved locally collected seed mix, locally collected cuttings, bare-root stock, etc. to revegetate areas disturbed by construction activities. All areas dominated by non-native species before Project disturbance shall be revegetated using appropriate native species. The seed mix shall consist of native, locally occurring species collected from local seed sources. Cuttings and bare-root stock shall be of local origin. Restoration shall include the revegetation of stripped or exposed work sites and/or areas to be mitigated with vegetation native to the area. No commercially purchased seeds, stock, etc. will be accepted without the approval of the USFS and BLM on NFS/BLM lands, and seeds must be certified to be free of noxious weeds. Revegetation shall include ground cover, grass, shrub, and tree species to match disturbed areas to surrounding conditions and to restore or improve wildlife habitat quality to pre-Project or higher levels. The Habitat Restoration and Revegetation Plan shall also include a monitoring element. Post seeding and planting monitoring reporting will be yearly from years one to five and every other year from years six to ten or until the success criteria are met. LADWP shall restore temporarily disturbed areas, including existing tower locations that are to be removed by the Project, to pre-construction conditions or the desired future conditions per the ANF LMP. If the survival and cover requirements have not been met, LADWP is responsible for replacement planting to achieve these requirements. Replacement plants shall be monitored with the same survival and growth requirements as previously mentioned. 3) On NFS land, the USFS/LADWP will conduct a preconstruction evaluation of the probable impacts to all oaks and native trees (over 3 inches DBH) in all construction-related disturbance areas. This evaluation shall be incorporated into the Habitat Restoration Plan and shall include the species and number of individuals, their DBH, location, and potential impact type. Construction within the driplines of all native trees and oak trees/shrubs, and incidental trimming or damage to trees along the proposed access/spur routes, shall not occur until the trees are evaluated by a USFS botanist or authorized arborist. This person shall identify appropriate measures to minimize tree loss, such as the placement of fence around the dripline, padding vehicles, minimizing soil removal or adding spoil around driplines, and the placement of matting under the existing dripline during construction activities. On the ANF, if a tree must have any construction-related activities such as equipment or soil staging within the drip zone, root pruning, or excessive branch pruning (greater than 25% in one year), then the tree must be monitored for five years for tree mortality. If any of these identified trees dies during the monitoring period, then the tree must be replaced at the rate appropriate to the DBH. 4) The replacement ratios (using rooted plants in liners or direct planting of acorns [for oaks]) for native trees or any oaks that are to be removed on the ANF shall be as follows: trees from 3 to 5 inches DBH shall be replaced at 3:1; trees from 5 to 12 inches shall be replaced at 5:1; trees from 12 to 24 inches shall be replaced at 10:1; trees from 24 to 36 inches shall be replaced at 15:1; and all oaks greater than 36 inches shall be replanted at a ratio of 20:1. The replacement ratio for damaged trees shall be 2:1 for trees with DBH less than 12 inches and a 5:1 ratio for trees with DBH greater than 12 inches. The DBHs for scrub oaks will be measured following California Department of Fish and Game (CDFG) guidelines. On the ANF, any oak or native tree that must be removed or killed as a result of construction or other Project-related activities shall be replaced in kind or mitigated (off-site) at a comparable value. Compliance shall be evaluated annually for years one to five and bi-annually for years six to ten (years after tree planting). Trees shall be planted at locations acceptable to the landowner or managing agency. All planting locations, procedures, and results shall be evaluated by an authorized arborist and USFS botanist. On non-federal lands, all protection and replacement measures shall be consistent with applicable local jurisdiction requirements, such as the Los Angeles County Oak Tree Ordinance. 5) Permanent impacts on federal lands shall be determined by the appropriate federal manager (USFS and BLM) at the ratios stated below (Table BIO-MM-1) or at a comparable value. On NFS and BLM lands, impacts will be considered permanent if the trees are not likely to recover by ten years post-disturbance. Where on-site restoration is planned for mitigation of temporary impacts to vegetation communities, LADWP shall identify a Habitat Restoration Specialist, where concurrence has been provided by the USFS, to implement the method of restoration outlined by the USFS/BLM in the Habitat Restoration Plan. 6) On USFS/BLM lands, the creation or restoration of habitat shall be monitored after mitigation site construction to assess progress and identify potential problems with the restoration site. This will be monitored on USFS/BLM		planting; (f) a description of the irrigation methodology for container, bare-root or other planting needing irrigation; (g) measures to control exotic vegetation on site; (h) success criteria; (i) a detailed monitoring program;(j) locations and impacts to all oaks and native trees (over 3 inches DBH); (k) locations of temporary or permanent gates, barricades, law enforcement patrolling, or other means to control unauthorized vehicle access on access and spur roads as deemed necessary by the USFS and BLM (NFS and BLM lands only). Restoration efforts will not adversely affect listed species or critical habitat, and measures will be implemented to protect these species during restoration. 2) LADWP shall utilize a USFS/BLM approved locally collected seed mix, locally collected cuttings, bare-root stock, etc. to revegetate areas disturbed by construction activities. All habitats dominated by non-native species before Project disturbance shall be revegetated using appropriate native species. USFS/ BLM approval is required for seeding on NFS/BLM land. The seed mix shall consist of native, locally occurring species collected from local seed sources. Cuttings and bare-root stock shall be of local origin. Restoration shall include the revegetation of stripped or exposed work sites and/or areas to be mitigated with vegetation native to the area. No commercially purchased seeds, stock, etc. will be accepted without the approval of the USFS and BLM on NFS/BLM lands, and seeds must be certified to be free of noxious weeds. Revegetation shall include ground cover, grass, shrub, and tree species to match disturbed areas to surrounding conditions and to restore or improve wildlife habitat quality to pre-Project or higher levels. The Habitat Restoration and Revegetation Plan shall also include a monitoring element. Post seeding and planting monitoring reporting will be yearly from years one to five and every other year from years six to ten or until the success criteria are met. LADWP shall restore temporarily disturbed areas, including existing tower locations that are to be removed by the Project, to pre-construction conditions or the desired future conditions per the ANF LMP. If the survival and cover requirements have not been met, LADWP is responsible for replacement planting to achieve these requirements. Replacement plants shall be monitored with the same survival and growth requirements as previously mentioned. 3) On NFS land, the USFS/LADWP will conduct a preconstruction evaluation of the probable impacts to all oaks and native trees in all construction-related disturbance areas. This evaluation shall be incorporated into the Habitat Restoration Plan and shall include the species and number of individuals, their DBH, location, and potential impact type. Construction within the driplines of all native trees and oak trees/shrubs, and incidental trimming or damage to trees along the proposed access/spur routes, shall not occur until the trees are evaluated by a USFS botanist or authorized arborist. This person shall identify appropriate measures to minimize tree loss, such as the placement of fence around the dripline, padding vehicles, minimizing soil removal or adding spoil around driplines, and the placement of matting under the existing dripline during construction activities. On the ANF, if a tree must have any construction-related activities such as equipment or soil staging within the drip zone, root pruning, or excessive branch pruning (greater than 25% in one year), then the tree must be monitored for five years for tree mortality. If any of these identified trees dies during the monitoring period, then the tree must be replaced at the rate appropriate to the DBH. 4) The replacement ratios (using rooted plants in liners or direct planting of acorns [for oaks]) for native trees or any oaks that are to be removed on the ANF shall be as follows: trees from 1 to 5 inches DBH shall be replaced at 3:1; trees from 5 to 12 inches shall be replaced at 5:1; trees from 12 to 24 inches shall be replaced at 10:1; trees from 24 to 36 inches shall be replaced at 15:1; and all oaks greater than 36 inches shall be replanted at a ratio of 20:1. The replacement ratio for damaged trees shall be 2:1 for trees with DBH less than 12 inches and a 5:1 ratio for trees with DBH greater than 12 inches. The DBHs for scrub oaks will be measured following California Department of Fish and Game (CDFG) guidelines. On the ANF. any oak or native tree that must be removed or killed as a result of construction or other Project-related activities shall be replaced in kind or mitigated (off-site) at a comparable value. Compliance shall be evaluated annually for years one to five and bi-annually for years six to ten (years after tree planting). Trees shall be planted at locations acceptable to the landowner or managing agency. All planting locations, procedures, and results shall be evaluated by an authorized arborist and USFS botanist. On non-federal lands, all protection and replacement measures shall be consistent with applicable local jurisdiction requirements, such as the Los Angeles County Oak Tree Ordinance. 5) Permanent impacts on federal lands shall be determined by the appropriate federal manager (USFS and BLM) at the ratios stated below (Table BIO-MM-1) or at a comparable value. On NFS and BLM lands, impacts will be considered permanent if the trees are not likely to recover by ten years post-disturbance. Where on-site restoration is planned for mitigation of temporary impacts to vegetation communities, LADWP shall identify a Habitat Restoration Specialist, where concurrence has been provided by the USFS, to implement the method of restoration outlined by the USFS/BLM in the Habitat Restoration Plan. 6) On USFS/BLM lands, the creation or restoration of habitat shall be monitored after mitigation site construction to assess progress and identify potential problems with the restoration site. This will be monitored on USFS/BLM lands

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	lands until the success criteria outlined in the restoration plan are met annually for years one to five, and bi-annually for years six to ten. Remediation activities (e.g., additional planting, removal of non-native invasive species, or erosion control) shall be taken until the success criteria are met as specified above, to ensure the success of the restoration effort. If the mitigation fails to meet the established success criteria after the ten-year maintenance and monitoring period, monitoring and remedial activities shall extend beyond the ten-year period until the criteria are met or unless otherwise specified by the USFS/BLM (as appropriate). If a fire occurs in a revegetation area before the success criteria are met, LADWP shall be responsible for a one-time replacement of vegetation. If a second fire occurs, no replanting is required, unless the fire is caused by LADWP activity. Off-site mitigation for NFS/BLM and non-NFS/BLM lands may be required if mitigation rates exceed what can be achieved on NFS/BLM land. This may be in the form of funding for land acquisition for inclusion into the Angeles National Forest or BLM lands affected by the Project, mitigation banking, removing existing structures, or comparable restoration efforts. 1b During and after construction, USFS/BLM-identified potential or existing entrances to Project-related disturbed areas such as access/spur roads, pull sites, staging areas, fly yards, landing zones, etc. on NFS/BLM lands shall be gated, blockaded and/or concealed in some manner and maintained to prevent the unauthorized use by the general public. Signs prohibiting unauthorized use of these disturbance areas shall be posted on these barricades if deemed necessary by the USFS/BLM. If barricades are being compromised, law enforcement patrolling may also be implemented to control unauthorized access onto Project disturbance areas. 1c Treat cut tree stumps with Sporax. All stumps of trees (conifers and hardwoods) resulting from activities associated with construction of the Project shall be treated with Sporax according to product directions to prevent the spread of annosus root disease. Only licensed applicators shall apply Sporax. Sporax shall not be used during rain events unless otherwise approved by the USFS.		until the success criteria are met or annually for years one to five, and bi-annually for years six to ten. Remediation activities (e.g., additional planting, removal of non-native invasive species, or erosion control) shall be taken during the ten-year period if necessary to ensure the success of the restoration effort. If the mitigation fails to meet the established performance criteria after the ten-year maintenance and monitoring period, monitoring and remedial activities shall extend beyond the ten-year period until the criteria are met or unless otherwise specified by the USFS/BLM (as appropriate). If a fire occurs in a revegetation area within the ten-year monitoring period, LADWP shall be responsible for a one-time replacement. If a second fire occurs, no replanting is required, unless the fire is caused by LADWP activity. Off-site mitigation for NFS/BLM and non-NFS/BLM lands may be required if mitigation rates exceed what can be achieved on NFS/BLM land. This may be in the form of funding for land purchase for inclusion into the Angeles National Forest, mitigation banking, removing existing structures, or comparable restoration efforts. 1b. During and after construction, USFS/BLM-identified potential or existing entrances to Project-related disturbed areas such as access/spur roads, pull sites, staging areas, fly yards, landing zones, etc. on NFS/BLM lands shall be gated, blockaded and/or concealed in some manner and maintained to prevent the unauthorized use by the general public. Signs prohibiting unauthorized use of these disturbance areas shall be posted on these barricades if deemed necessary by the USFS/BLM. If barricades are being compromised, law enforcement patrolling may also be implemented to control unauthorized access onto Project disturbance areas. 1c. Treat cut tree stumps with Sporax. All stumps of trees (conifers and hardwoods) resulting from activities associated with construction of the Project shall be treated with Sporax according to product directions to prevent the spread of annosus root disease. Only licensed applicators shall apply Sporax. Sporax shall not be used during rain events unless otherwise approved by the USFS.

TABLE BIO-MM-1. SUMMARY OF ESTIMATED IMPACTS TO VEGETATION COMMUNITIES ON FEDERAL LANDS

Vegetation Communities	Jurisdiction	Permanent Impacts (acres)			Temporary Impact (acres)			Total Estimated Mitigation (acres)
		Estimated Impact	Ratio	Estimated Off-site Mitigation	Estimated Impact	Ratio	Estimated On-site Restoration	
Alternative 1								
Chamise Chaparral	USFS	16.73	3:1	50.19	56.06	1:1	56.06	106.25
Mojave Creosote Bush Scrub	BLM	2.68	1:1	2.68	21.81	1:1	21.81	24.49
Mojave Wash Scrub	BLM	0.25	1:1	0.25	2.05	1:1	2.05	2.30
Riversidian Sage Scrub	USFS	3.06	5:1	15.3	10.48	2:1	20.96	36.26
Southern Coast Live Oak Riparian Forest	USFS	0.05	5:1	0.25	0.38	2:1	0.76	1.01
Southern Cottonwood Willow Riparian Forest	USFS	0.42	5:1	2.1	0.86	2:1	1.72	3.82
Southern Mixed Chaparral	USFS	14.13	3:1	42.39	45.81	1:1	45.81	88.20
Southern Sycamore Alder Riparian Woodland	USFS	0.13	5:1	0.65	0.25	2:1	0.5	1.15
Southern Willow Scrub	USFS	0.32	3:1	0.96	1.30	2:1	2.6	3.56
Alternative 2								
Chamise Chaparral	USFS	10.11	3:1	30.33	39.38	1:1	39.38	69.71
Barren/developed	USFS	7.8	1:1	7.8	24.8	1:1	24.8	32.6
Mojave Creosote Bush Scrub	BLM	2.69	1:1	2.69	21.82	1:1	21.82	24.51
Mojave Wash Scrub	BLM	0.25	1:1	0.25	2.06	1:1	2.06	2.31
Riversidian Sage Scrub	USFS	1.84	5:1	9.2	8.85	2:1	17.7	26.9
Southern Coast Live Oak Riparian Forest	USFS	0.69	5:1	3.45	3.39	2:1	6.78	10.23
Southern Mixed Chaparral	USFS	3.24	3:1	9.72	8.77	1:1	8.77	18.49
Southern Riparian Scrub	USFS	0.33	3:1	0.99	0.66	1:1	0.66	1.65
Southern Sycamore Alder Riparian Woodland	USFS	0.87	5:1	4.35	2.2	2:1	4.4	8.75
Alternative 2a								
Chamise Chaparral	USFS	10.11	3:1	30.33	39.38	1:1	39.38	69.71
Barren/developed	USFS	3.24	1:1	3.24	12.72	1:1	12.72	15.96
Interior Live Oak Chaparral	USFS	2.06	5:1	10.3	5.60	2:1	11.2	21.5

Vegetation Communities	Jurisdiction	Permanent Impacts (acres)			Temporary Impact (acres)			Total Estimated Mitigation (acres)
		Estimated Impact	Ratio	Estimated Off-site Mitigation	Estimated Impact	Ratio	Estimated On-site Restoration	
Mojave Creosote Bush Scrub	BLM	2.68	1:1	2.68	21.81	1:1	21.81	24.49
Mojave Wash Scrub	BLM	0.25	1:1	0.25	2.05	1:1	2.05	2.3
Riversidian Sage Scrub	USFS	1.84	5:1	9.2	8.85	2:1	17.7	26.9
Scrub Oak Chaparral	USFS	1.46	5:1	7.3	3.19	2:1	6.38	13.68
Southern Coast Live Oak Riparian Forest	USFS	0.69	5:1	3.45	3.40	2:1	6.8	10.25
Southern Mixed Chaparral	USFS	9.03	3:1	27.09	27.88	1:1	27.88	54.97
Southern Riparian Scrub	USFS	0.33	5:1	1.65	0.66	2:1	1.32	2.97
Southern Sycamore Alder Riparian Woodland	USFS	0.81	5:1	4.05	1.64	2:1	3.28	7.33
Alternative 3								
Chamise Chaparral	BLM	0.00	1:1	0.0	0.02	1:1	0.02	0.02
Barren/developed	USFS	1.04	1:1	1.04	2.13	1:1	2.13	3.17
Mojave Creosote Bush Scrub	BLM	2.68	1:1	2.68	21.81	1:1	21.81	24.49
Mojave Wash Scrub	BLM	0.25	1:1	0.25	2.05	1:1	2.05	2.3
Riversidian Sage Scrub	USFS	9.57	5:1	47.85	28.19	2:1	56.38	104.23
Scrub Oak Chaparral	USFS	2.87	5:1	14.35	5.83	2:1	11.66	26.01
Southern Riparian Scrub	USFS	0.34	5:1	1.7	0.69	2:1	1.38	3.08
New Circuit								
Chamise Chaparral	USFS	8.03	3:1	24.09	23.05	1:1	23.05	47.14
Riversidian Sage Scrub	BLM	0.04	1:1	0.04	0.34	1:1	0.34	0.38
Riversidian Sage Scrub	USFS	1.98	5:1	9.9	5.96	2:1	11.92	21.82
Southern Coast Live Oak Riparian Forest	USFS	0.08	5:1	0.4	0.66	2:1	1.32	1.72
Southern Cottonwood Willow Riparian Forest	USFS	0.40	5:1	2.0	0.80	2:1	1.6	3.6
Southern Sycamore Alder Riparian Woodland	USFS	0.09	5:1	0.45	0.19	2:1	0.38	0.83
Reconductoring								
Chamise Chaparral (Segment ABG)	USFS	16.07	3:1	48.21	32.65	1:1	32.65	80.86
Barren/developed (Segment ABG)	USFS	7.77	1:1	7.77	25.28	1:1	25.28	33.05
Mojave Creosote Bush Scrub (Segment ABG)	BLM	2.85	1:1	2.85	23.16	1:1	23.16	26.01
Mojave Wash Scrub (Segment ABG)	BLM	0.23	1:1	0.23	1.86	1:1	1.86	2.09
Riversidian Sage Scrub (Segment ABG)	USFS	5.07	5:1	25.35	10.30	2:1	20.6	45.95
Southern Coast Live Oak Riparian Forest (Segment ABG)	USFS	3.25	5:1	16.25	6.60	2:1	13.2	29.45
Southern Mixed Chaparral (Segment ABG)	USFS	2.86	3:1	8.58	8.01	1:1	8.01	16.59
Southern Riparian Scrub (Segment ABG)	USFS	0.33	5:1	1.65	0.66	2:1	1.32	2.97
Southern Sycamore Alder Riparian Woodland (Segment ABG)	USFS	0.95	5:1	4.75	2.34	2:1	4.68	9.43
Southern Coast Live Oak Riparian Forest (Segment K)	BLM	0.02	1:1	0.02	0.04	1:1	0.04	0.06
Southern Mixed Chaparral (Segment K)	BLM	0.00	1:1	0.0	0.01	1:1	0.01	0.01

Note: The permanent and temporary impact calculations provided above are estimates based on the impact model described in Appendix C of the Biological Resources Technical Report. Therefore, acreage numbers for the habitat types listed above may be smaller than those listed in the table. Preconstruction surveys will be conducted to estimate the acreage impacts and will be based on the final design not the impact model.

Number	Mitigation Measure	Adopted - Yes/Modified	Modified Mitigation Measure
BIO-2	*The following prescriptions would prevent the spread of invasive weeds into previously uninfested areas in the designated construction right-of-way.* 2a Prepare and implement a Weed Control Plan. LADWP/ANF/BLM shall prepare and implement a comprehensive, adaptive Weed Control Plan on NFS/BLM lands for pre-construction and construction invasive weed abatement. The Weed Control Plan, including monitoring and eradication, will be part of the 50 year Operations and Maintenance Permit. On ROW easement lands administered by the USFS/BLM, the Weed Control Plan shall incorporate all appropriate and legal agency-stipulated regulations including consulting with CDFG on CESA species. The Weed Control Plan shall be submitted to the USFS/BLM for final authorization of weed control methods, practices, and timing before implementation of the Weed Control Plan on public lands. Weed control on BLM lands using pesticides would require site-specific NEPA analysis and an approved BLM Pesticide Use Permit. Pesticide Use Permits are issued for a maximum of three years. ROW easements on private lands shall include provisions such as wheel and equipment washing as part of implementation of the Weed Control Plan. The Weed Control Plan shall include the following stipulations: 1) A pre-construction weed inventory shall be conducted on NFS and BLM lands by surveying all areas subject to ground-disturbing activity, including, but not limited to, tower pad preparation and construction areas, tower removal sites, pulling and tensioning sites, assembly yards, and areas subject to grading for new or improved access and spur roads. Weed populations that: (1) are rated High or Moderate for negative ecological impact in the California Invasive Plant Inventory Database (Cal-IPC 2006); (2) aid and promote the spread of wildfires (such as cheatgrass, Saharan mustard, and medusa head); and (3) are considered by the USFS and/or BLM as species of priority (for NFS/BLM lands only) shall be mapped and described according to density and area covered. In areas subject to ground disturbance, weed infestations shall be treated before construction according to control methods and practices for invasive weed populations designed in consultation with the USFS/BLM. The Weed Control Plan shall be updated and guide post-construction eradication and monitoring efforts. 2) Weed control treatments shall include all legally permitted herbicide application, manual, and mechanical methods applied with the authorization of the USFS/BLM. The application of herbicides shall be in compliance with all State and federal laws and regulations under the prescription of a Pest Control Advisor (PCA), where concurrence has been provided by the USFS/BLM, and implemented by a Licensed Qualified Applicator. The most effective herbicides with the least toxic surfactant available shall be used. Herbicides shall not be applied during or within 24 hours of a 70% chance of occurring rain event. Herbicides shall not be used within Riparian Conservation Areas (RCAs) on the ANF without approval of the USFS. In riparian areas, only water-safe herbicides, surfactants and adjuvants shall be used. Herbicides shall not be applied by spray equipment when wind velocities exceed 6 mph. Herbicides applied by sponge or paintbrush to cut stumps shall not be applied at wind speeds over 15 mph. In areas containing special-status plants or animals, there will be a 5- to 70-foot buffer where herbicides are not used. The size of the buffer will be determined and flagged for avoidance by an approved botanist/biologist, based on phenology or life cycle at time of treatment, rareness and imperilment of adjacent native species, herbicide being used, method of herbicide application, concentration of herbicide being used based on no observed effect to non-target species, and/or environmental conditions and terrain. Where manual and/or mechanical methods are used, disposal of the plant debris will follow the regulations set by the USFS/BLM. The timing of the weed control treatment shall be determined for each plant species in consultation with the USFS/BLM (on NFS/BLM lands) with the goal of controlling populations before they start producing seeds. Pre-emergent herbicides will only be used in areas that have a very low potential for supporting native plant species after disturbance, as determined by an authorized botanist. For the preconstruction and construction of the Project, measures to control the introduction and spread of noxious weeds in the Project work area shall be taken as follows. 3) On the ANF and BLM lands, surveying for new invasive weed populations and the monitoring of identified and treated populations shall be required at all sites impacted by construction (tower pads, staging areas, landing zones, etc.), including access/spur roads disturbed during the Project. Surveying and monitoring for weed infestations shall occur annually for years one to five and bi-annually for years six to ten, or until success criteria as outlined in the Weed Control Plan are met. Treatment of all identified weed populations shall occur at an appropriate interval so as to meet the success criteria. When no new seedlings or resprouts are observed at treated sites for three consecutive, normal rainfall years, the weed population can be considered eradicated and weed control efforts may cease for that site. 4) During Project preconstruction and construction, all seeds and straw materials shall be weed-free when available, and all gravel and fill material shall be certified weed-free by the county Agriculture Commissioners' Offices. Any deviation from this must be approved by a USFS/BLM botanist. All plant materials used during restoration shall be	Modified for consistency with the Final Biological Assessment as submitted to USFWS	*The following prescriptions would prevent the spread of invasive weeds into previously uninfested areas in the designated construction right-of-way.* 2a Prepare and implement a Weed Control Plan. LADWP/ANF/BLM shall prepare and implement a comprehensive, adaptive Weed Control Plan on NFS/BLM lands for pre-construction and construction invasive weed abatement. The long-term Weed Control Plan, including monitoring and eradication, will be defined as part of the 50 year Operations and Maintenance Permit. On the ROW easement lands administered by the USFS/BLM, the Weed Control Plan shall incorporate all appropriate and legal agency-stipulated regulations. The Weed Control Plan shall be submitted to the USFS/BLM for final authorization of weed control methods, practices, and timing before implementation of the Weed Control Plan on public lands. Weed control on BLM lands using pesticides will require an approved BLM Pesticide Use Permit. Pesticide Use Permits are issued for a maximum of three years. ROW easements located on private lands shall include adaptive provisions such as wheel and equipment washing for the implementation of the Weed Control Plan. The Weed Control Plan shall include the following: 1) A pre-construction weed inventory shall be conducted on NFS and BLM lands by surveying all areas subject to ground-disturbing activity, including, but not limited to, tower pad preparation and construction areas, tower removal sites, pulling and tensioning sites, assembly yards, and areas subject to grading for new or improved access and spur roads. Weed populations that: (1) are rated High or Moderate for negative ecological impact in the California Invasive Plant Inventory Database (Cal-IPC 2006); (2) aid and promote the spread of wildfires (such as cheatgrass, Saharan mustard, and medusa head); and (3) are considered by the USFS and/or BLM as species of priority (for NFS/BLM lands only) shall be mapped and described according to density and area covered. In areas subject to ground disturbance, weed infestations shall be treated before construction according to control methods and practices for invasive weed populations designed in consultation with the USFS/BLM. The Weed Control Plan shall be updated and utilized for eradication and monitoring post-construction. 2) Weed control treatments shall include all legally permitted herbicide, manual, and mechanical methods applied with the authorization of the USFS/BLM. The application of herbicides shall be in compliance with all State and federal laws and regulations under the prescription of a Pest Control Advisor (PCA), where concurrence has been provided by the USFS/BLM, and implemented by a Licensed Qualified Applicator, if the herbicide is in the restricted use category. The most effective herbicides with the least toxic surfactant available shall be used. Herbicides shall not be applied during or within 24 hours of a 70% chance of occurring rain event. Herbicides shall not be used within Riparian Conservation Areas (RCAs) on the ANF without approval of the USFS. In riparian areas, only water-safe herbicides, surfactants and adjuvants shall be used. Herbicides shall not be applied by spray equipment when wind velocities exceed 6 mph. Herbicides applied by sponge or paintbrush to cut stumps shall not be applied at over 15 mph. In areas containing special-status plants or animals, there will be a 5- to 70-foot buffer where herbicides are not used. The size of the buffer will be determined and flagged for avoidance by an authorized botanist/biologist, based on phenology or life cycle at time of treatment, rareness and imperilment of species, vulnerability of herbicide being used, concentration of herbicide used based on no observed effect concentrations and/or environmental conditions and terrain. Where manual and/or mechanical methods are used, disposal of the plant debris will follow the regulations set by the USFS/BLM. The timing of the weed control treatment shall be determined for each plant species in consultation with the USFS/BLM (on NFS/BLM lands) with the goal of controlling populations before they start producing seeds. Pre-emergent herbicides will only be used in areas that have a very low potential for supporting native plant species after disturbance, as determined by an agency botanist. For the preconstruction and construction of the Project, measures to control the introduction and spread of noxious weeds in the Project work area shall be taken as follows. 3) On the ANF and BLM lands, surveying for new invasive weed populations and the monitoring of identified and treated populations shall be required at all sites impacted by construction (tower pads, staging areas, landing zones, etc.), including access/spur roads disturbed during the Project. Surveying and monitoring for weed infestations shall occur annually for years one to five and bi-annually for years six to ten, or until success criteria are met. Treatment of all identified weed populations shall occur at an appropriate interval so as to meet the success criteria. When no new seedlings or resprouts are observed at treated sites for three consecutive, normal rainfall years, the weed population can be considered eradicated and weed control efforts may cease for that impact site. 4) During Project preconstruction and construction, all seeds and straw materials shall be weed-free rice straw, and all gravel and fill material shall be certified weed-free by the county Agriculture Commissioners' Offices. Any deviation from this must be approved by a USFS/BLM botanist. All plant materials used during restoration shall be native, certified weed-free, and approved by the USFS/BLM.

Number	Mitigation Measure	Adopted - Yes/Modified	Modified Mitigation Measure
	native, certified weed-free, and approved by the USFS/BLM. 5) Before beginning preconstruction activities, the USFS and the BLM, in coordination with LADWP, will determine suitable locations to install field washing stations as part of the Weed Control Plan. Before commencing construction activities, LADWP shall document that all vehicles, equipment, and tools used on the Project have been cleaned at existing construction yard wash facilities or legally operating car washes. This is a one-time requirement designed to address the potential of new species of weeds being transported from outside the area. If, however, vehicles, equipment, or tools are used or driven off paved roads on non-NFS/BLM lands, washing must occur before entering USFS/BLM lands. During Project preconstruction and construction, all vehicles, equipment, or tools which will be used outside of permitted Project roadways shall be washed at the nearest wash station before operating off-road. In other areas also designated by the USFS/BLM, vehicles, equipment, and tools will be washed at the nearest wash station after exiting those areas. Vehicles that do not leave permitted Project roadways are not required to be washed after the initial washing described above. All washing shall take place where rinse water is collected and disposed of in either a sanitary sewer or landfill, unless otherwise approved by the USFS/BLM. For NFS lands, plant material may also be removed by air compressors at USFS botanist/LADWP-approved locations. Written daily logs shall be kept for all vehicle/equipment/tool washing that records the date, time, location, type of equipment washed, methods used, and staff present. The log shall include the signature of a responsible staff member. Logs shall be available to the USFS and BLM for inspection at any time and shall be submitted to the USFS and BLM permit administrators on a monthly basis. 6) During Project operation and maintenance activities, weeds shall be removed in assembly yards, helicopter landing areas, tower pads, spur roads, staging areas, and any other disturbance areas in a USFS/BLM-approved method. 2b Remove weed seed sources from construction access routes. Before construction, LADWP shall initiate invasive species eradication along construction access routes to minimize the potential of weeds spreading aggressively during construction. Post-construction, these treatment areas will be included and treated according to the restoration plan. Per the Forest Service Manual (FSM) 2080 Best Management Practice (BMP) guideline, LADWP shall also remove or reduce sources of weed seed along the travel routes associated with Project construction. Weed species identified along the Alternatives and associated access roads include tocalote, artichoke thistle, tree tobacco, saltcedar, slender wild oat/wild oat, ripgut brome, soft chess brome, red brome, cheatgrass, blessed thistle, filaree, shortpod mustard, prickly lettuce, common horehound, yellow sweetclover, rabbit foot grass, Mediterranean grass, sowthistle, rat-tail fescue, tree-of-heaven, giant reed grass, yellow starthistle, bull thistle, fennel, perennial pepperweed, and black locust.. To prevent the introduction or control the spread of invasive weeds, herbicide, hand removal or other control methods will be implemented to reduce seed production during Project construction. Following Project approval and during the time of year when weed species can be observed and identified, LADWP shall identify, using an authorized plant ecologist, any other weed seed sources that could contribute to Project-related weed spread on the ANF and BLM lands. Target infestations identified by Project surveys should be controlled before construction. LADWP shall initiate eradication of the target infestations discovered during pre-construction surveys along construction routes. 2c Remove weed seed sources from assembly yards, staging areas, tower pads, pull sites, landing zones, and spur roads. Before construction and during each year of construction at all assembly yards, staging areas, tower pads, pull sites, landing zones, and spur roads within the ANF and BLM lands, weed-infested areas shall be hand-weeded and/or treated as appropriate for the individual weed species under the guidance of an authorized plant ecologist or restoration ecologist, where concurrence on the ecologist has been provided by the USFS/BLM. Unless otherwise authorized by the USFS/BLM, weed control efforts in these areas shall be timed annually to reduce shortpod mustard, tocalote, bromes and other invasive weed seed production, by herbicide application or other control techniques prior to flowering. All plant debris shall be disposed of at a USFS/BLM approved location. Weed control efforts shall commence in early spring (February – March), as indicated annually by an authorized plant ecologist or restoration ecologist in coordination with LADWP and USFS/BLM botanist or weed specialist. 2d Use of Herbicides to Control Exotic Weeds. LADWP may use herbicides where deemed necessary for the control of invasive weeds within the Project area. Weed control shall be species-specific, and herbicides shall be applied only if necessary after considering alternate methods or as part of a proven eradication strategy for the particular weed species. To minimize potential impacts, weed control treatments shall include all legally permitted herbicide, manual, and mechanical methods applied with the authorization of the USFS/BLM. Due to typically large seed banks and the ability of some weed species to vigorously resprout following removal methods, most species require more than one round of treatment, or require a different follow-up treatment method after the initial removal occurs. Any herbicide use on NFS		5) Before beginning preconstruction activities, the USFS, in coordination with LADWP, will determine suitable locations to install field washing stations as part of the Weed Control Plan. Before commencing construction activities, LADWP shall document that all vehicles, equipment, and tools used on the Project have been cleaned at existing construction yards or legally operating car washes. This is a one-time requirement designed to address the potential of new species of weeds being transported from outside the area. If, however, vehicles, equipment, or tools are used or driven off paved roads on non-NFS lands, washing must occur before entering USFS lands. During Project preconstruction and construction, all vehicles, equipment, or tools which will be used outside of permitted Project roadways shall be washed at the nearest station before operating off-road. In other areas also designated by the USFS, vehicles, equipment, and tools will be washed at the nearest station after exiting those areas. Vehicles that do not leave permitted Project roadways are not required to be washed after the initial washing described above. All washing shall take place where rinse water is collected and disposed of in either a sanitary sewer or landfill, unless otherwise approved by the USFS. Written daily logs shall be kept for all vehicle/equipment/tool washing that states the date, time, location, type of equipment washed, methods used, and staff present. The log shall include the signature of a responsible staff member. Logs shall be available to the USFS for inspection at any time and shall be submitted to the USFS permit administrator on a monthly basis. 6) During Project operation and maintenance activities, weeds shall be cleared and disposed of in assembly yards, helicopter landing areas, tower pads, spur roads, staging areas, and any other disturbance areas in a USFS/BLM-approved method. 2b Remove weed seed sources from construction access routes. Before construction, LADWP shall initiate invasive species eradication. Populations to be treated will be small to moderate and isolated, but have the potential to spread aggressively during construction. Post-construction, these isolated populations will be included and treated according to the restoration plan. Per the Forest Service Manual (FSM) 2080 Best Management Practice (BMP) guideline, LADWP shall also remove or reduce sources of weed seed along the travel routes associated with Project construction. Weed species identified along the Alternatives and associated access roads include tocalote, artichoke thistle, tree tobacco, saltcedar, slender wild oat/wild oat, ripgut brome, soft chess brome, red brome, cheatgrass, blessed thistle, filaree, shortpod mustard, prickly lettuce, common horehound, yellow sweetclover, rabbit foot grass, Mediterranean grass, sowthistle, rat-tail fescue, tree-of-heaven, giant reed grass, yellow starthistle, bull thistle, fennel, perennial pepperweed, and black locust. To prevent the introduction or control the spread of noxious weeds, hand removal or other control methods will be implemented to reduce seed production during Project construction. Following Project approval and during the time of year when weed species can be observed and identified, LADWP shall identify, using an authorized plant ecologist, any other weed seed sources that could contribute to Project-related weed spread on the ANF and BLM lands. Target infestations identified by Project surveys should be controlled before construction. LADWP shall initiate eradication of the target infestations discovered during pre-construction surveys along construction routes. 2c Remove weed seed sources from assembly yards, staging areas, tower pads, pull sites, landing zones, and spur roads. Before construction and during each year of use for construction at all assembly yards, staging areas, tower pads, pull sites, landing zones, and spur roads within the ANF and BLM lands, weed-infested areas should be hand-weeded and/or treated as appropriate for the individual weed species under the guidance of an authorized plant ecologist or restoration ecologist, where concurrence on the ecologist has been provided by the USFS/BLM. Unless otherwise authorized by the USFS/BLM, weed control efforts in these areas shall be timed annually to reduce shortpod mustard, tocalote, bromes and other noxious weed seed production, by hand-removing or weed-whacking infestations when flowering has just started, but before seeds have been produced. All plant debris shall be disposed of at a USFS/BLM approved location. Weed control efforts shall commence in early spring (February – March), as indicated annually by an authorized plant ecologist or restoration ecologist in coordination with LADWP and USFS/BLM botanist or weed specialist. 2d Use of Herbicides to Control Exotic Weeds. LADWP may use herbicides where deemed necessary for the control of exotic weeds within the Project area. Weed control should be species-specific, and herbicides should be applied only if necessary after considering alternate methods or as part of a proven eradication strategy for that weed species. To minimize potential impacts, weed control treatments shall include all legally permitted herbicide, manual, and mechanical methods applied with the authorization of the USFS. Due to typically large seed banks and the ability of some weed species to vigorously resprout following removal methods, most species require more than one round of treatment, or require a different follow-up treatment method after the initial removal occurs. Any herbicide use on NFS lands, BLM lands, and private lands would be subject to the review and approval of the appropriate personnel and in coordination with LADWP.

Number	Mitigation Measure	Adopted - Yes/Modified	Modified Mitigation Measure
	lands would be subject to the review and approval of the appropriate USFS personnel and in coordination with LADWP. On BLM lands, herbicide use will be guided by an approved, site-specific Pesticide Use Proposal.		
BIO-3	*Incorporate riparian area avoidance and permit measures.* The following actions and all permit conditions detailed within the U.S. Army Corps of Engineers individual or Nationwide 12 permit, CDFG 1602 Streambed Alteration Agreement, and RWQCB 401 water quality certification (subject to separate approval) would be implemented by the construction manager and environmental compliance monitor(s). 3a LADWP shall not construct or modify any structure, culvert, or bridge or modify any habitat on NFS lands in RCAs without the authorization of the USFS. Vegetation removal or road construction shall not occur in RCAs during the breeding season for nesting birds (February 1 to August 15) unless otherwise approved by the USFS. LADWP shall prepare and implement a USFS RCA Treatment Plan for the Project. This Plan shall include the specific activities that will occur at each of the RCA points crossed by the Project, including the amount and type of vegetation to be cleared, the type of road crossing or improvement allowed for wet and dry crossings, and the methods that would be employed to reduce the effects of the Project on water quality. The Plan shall include seasonal restrictions for vehicle or equipment passage, restrictions on what activities may occur (such as grading, vegetation removal or tree trimming), monitoring requirements, and restoration requirements. This Plan shall be submitted to the USFS for approval before construction or the grading of any access road. 3b Before construction, an authorized biologist shall stake and flag or fence exclusion zones around all identified riparian areas. Such exclusion zones will include an appropriate buffer to preclude sediment intrusion into the riparian areas. Earth-moving activities shall be restricted from these zones, although essential vehicle operation and foot travel will be permitted on existing roads, bridges, and crossings. All other construction activities, vehicle operation, material and equipment storage, and other surface-disturbing activities will be prohibited within the exclusion zone. 3c In areas where riparian habitats are unavoidable, the construction manager, in consultation with the lead environmental compliance inspector and USFS, shall narrow the width of the road through the area to the minimum extent required for safe travel. New spur roads and existing access road improvements shall be constructed and implemented using methodology that preserves existing hydrology. 3d Towers shall not be constructed in riparian areas. 3e All temporarily disturbed riparian areas that would not be utilized for future routine operation and maintenance activities shall be restored according to the guidelines of the Habitat Restoration Plan to the extent required to ensure no net loss of habitat functions and values. Following construction activities, the areas will be restored as soon as practicable. 3f Permanent, unavoidable losses of riparian areas will be mitigated by restoration and/or preservation of off-site habitats, as outlined in the Habitat Restoration Plan. The final mitigation and off-site restoration locations will be determined in consultation with LADWP and the relevant permitting agency(s). Mitigation acreage ratios will be consistent with those listed in Table BIO-MM-1.	Modified for consistency with the Final Biological Assessment as submitted to USFWS	*Incorporate riparian area avoidance and permit measures.* The following actions and all permit conditions detailed within the Nationwide 12 permit, CDFG 1602 Streambed Alteration Agreement, and RWQCB 401 water quality certification (subject to separate approval) would be implemented by the construction manager and environmental compliance monitor(s). 3a LADWP shall not construct or modify any structure, culvert, or bridge or modify any habitat on NFS lands in RCAs without the authorization of the USFS. Vegetation removal or road construction shall not occur in RCAs during the breeding season for nesting birds (February 1 to August 15) unless otherwise approved by the USFS. LADWP shall prepare and implement a USFS RCA Treatment Plan for the Project. This Plan shall include the specific activities that will occur at each of the RCA points crossed by the Project, including the amount and type of vegetation to be cleared, the type of road crossing or improvement allowed for wet and dry crossings, and the methods that would be employed to reduce the effects of the Project on water quality. The Plan shall include seasonal restrictions for vehicle or equipment passage, restrictions on what activities may occur (such as grading, vegetation removal or tree trimming), monitoring requirements, and restoration requirements. This Plan shall be submitted to the USFS for approval before construction or the grading of any access road. 3b Before construction, authorized biologist shall stake and flag or fence exclusion zones around all identified riparian areas. Such exclusion zones will include a 10-foot buffer to preclude sediment intrusion into the riparian areas. Earth-moving activities shall be restricted from these zones, although essential vehicle operation and foot travel will be permitted on existing roads, bridges, and crossings. All other construction activities, vehicle operation, material and equipment storage, and other surface-disturbing activities will be prohibited within the exclusion zone. 3c In areas where riparian habitats are unavoidable, the construction manager, in consultation with the lead environmental compliance inspector and USFS, shall narrow the width of the road through the area to the minimum extent required for safe travel. New spur roads and existing access road improvements shall be constructed and implemented using methodology that preserves existing hydrology. 3d Towers shall not be constructed in riparian areas. 3e All temporarily disturbed riparian areas that would not be utilized for future routine operation and maintenance activities shall be restored according to the guidelines of the Habitat Restoration Plan to the extent required to ensure no net loss of habitat functions and values. Following construction activities, the areas will be restored as soon as practicable. 3f Permanent, unavoidable losses of riparian areas will be mitigated by restoration and/or preservation of off-site habitats, as outlined in the Habitat Restoration Plan. The final mitigation and off-site restoration locations will be determined in consultation with LADWP and the responsible agency(s). Mitigation acreage ratios will be consistent with those listed in Table BIO-MM-1
BIO-4	*Provide restoration/compensation for affected jurisdictional areas.* 4a Impacts to areas under jurisdiction of the USACE, RWQCB, USFS and CDFG shall be avoided to the extent feasible. Where avoidance of jurisdictional areas is not feasible, including emergency repairs, and access/spur roads within RCAs, the applicant shall provide the necessary mitigation required as part of wetland permitting. This will include creation, restoration, and/or preservation of suitable jurisdictional habitat along with adequate buffers to protect the function and values of jurisdictional area mitigation. The location(s) of the mitigation will be determined in consultation with LADWP and the responsible agency(s) as part of the wetland permitting process. 4b Measures 3a, b, c, and d will also be incorporated to avoid and protect jurisdictional areas.	Modified for consistency with the Final Biological Assessment as submitted to USFWS	*Provide restoration/compensation for affected jurisdictional areas.* 4a Impacts to areas under jurisdiction of the USACE, RWQCB, USFS and CDFG shall be avoided to the extent feasible. Where avoidance of jurisdictional areas is not feasible, including emergency repairs, and access/spur roads within RCAs, the applicant shall provide the necessary mitigation required as part of wetland permitting. This will include creation, restoration, and/or preservation of suitable jurisdictional habitat along with adequate buffers to protect the function and values of jurisdictional area mitigation. The location(s) of the mitigation will be determined in consultation with LADWP and the responsible agency(s) as part of the wetland permitting process. 4b Measures 3a, b, c, and d will also be incorporated to avoid and protect jurisdictional areas.
BIO-5	*Construction activities and vehicle operation would be conducted to minimize potential disturbance to wildlife.* 5a. Conduct preconstruction surveys in locations where potential habitat exists for special-status species to avoid impacts during construction. If wildlife sign or habitat is detected during the surveys, construction activities will be monitored by authorized biologists, or exclusion fencing will be placed around work areas. If federally listed species are found within the area of potential effect, the authorized biologist shall notify the construction manager and the USFWS. The construction manager, in consultation with the USFWS and the authorized biologist, will have the authority to halt all activities until appropriate avoidance measures have been completed. If non-federal special-status species are found within the area of potential effect, the USFS, BLM, and CDFG will be notified and, in consultation with these agencies, agreed-upon appropriate actions to address impacts to the species will be implemented. This only applies to species that are not listed under the California Endangered Species Act (CESA) unless authorized by an Incidental Take Permit (ITP) or not fully protected under Fish and Game Code or Title 14, California Code of Regulations (CCR).	Modified for consistency with the Final Biological Assessment as submitted to USFWS	*Construction activities and vehicle operation would be conducted to minimize potential disturbance to wildlife.* 5a. Conduct preconstruction surveys in locations where potential habitat exists for special-status species. If sign or habitat is detected during the surveys, construction activities will be monitored by authorized biologists, or exclusion fencing will be placed around work areas. If federally listed individuals are found within the area of potential effect, the authorized biologist shall notify the construction manager and USFWS. The construction manager, in consultation with the USFWS and the authorized biologist, will have the authority to halt all activities until appropriate corrective measures have been completed. If non-federal special-status species are found within the area of potential effect, USFS, BLM and CDFG will be notified and, in consultation with these agencies, the species will be relocated to areas that are not potentially impacted by the Project. This only applies to species that are not listed under the California Endangered Species Act (CESA) unless authorized by an Incidental Take Permit (ITP) or not fully protected under Fish and Game Code or Title 14, California Code of Regulations (CCR).

Number	Mitigation Measure	Adopted - Yes/Modified	Modified Mitigation Measure
	5b. Cover all steep-walled trenches or excavations used during construction to prevent entrapment of wildlife (e.g., reptiles and small mammals). If the trenches or excavations cannot be covered, escape ramps shall be placed into the trench or excavated area, or exclusion fencing (i.e., silt fencing) shall be installed around the trench or excavation to prevent entrapment of wildlife. Open trenches, or other excavations that could entrap wildlife, shall be inspected by the authorized biologists a minimum of three times per day and immediately before backfilling. All excavated areas shall be covered if left overnight. Furthermore, employees and contractors shall look under vehicles and equipment for the presence of wildlife before moving the vehicle or equipment. If wildlife is observed, no vehicles or equipment would be moved until the animal has left voluntarily or is moved out of harm's way by an authorized biologist. Should a dead or injured special-status species be found in a trench or excavation or anywhere in the construction zone or along an access road, the authorized biologist shall contact BLM and/or USFS (for activities on land managed by the agencies) and the Wildlife Agencies within 48 hours of the finding. The authorized biologist shall record the species found, the location of the finding, and the cause of death (if known), and shall submit a photograph and any other pertinent information; this information shall be submitted to the appropriate wildlife agency.		5b. Cover all steep-walled trenches or excavations used during construction to prevent entrapment of wildlife (e.g., reptiles and small mammals). If the trenches or excavations cannot be covered, a ramp that will sufficiently allow wildlife to escape shall be placed into the trench or excavated area, or exclusion fencing (i.e., silt fencing) shall be installed around the trench or excavation to prevent entrapment of wildlife. Open trenches, or other excavations that could entrap wildlife, shall be inspected by the authorized biologists a minimum of three times per day and immediately before backfilling. Furthermore, employees and contractors shall look under vehicles and equipment for the presence of wildlife before moving the vehicle or equipment. If wildlife is observed, no vehicles or equipment would be moved until the animal has left voluntarily or is removed by the authorized biologist. Should a dead or injured special-status species be found in a trench or excavation or anywhere in the construction zone or along an access road, the authorized biologist shall contact BLM and/or USFS (for activities on land managed by the agencies) and the Wildlife Agencies within 48 hours of the finding. The authorized biologist shall report the species found, the location of the finding, and the cause of death (if known), and shall submit a photograph and any other pertinent information.
BIO-6	*Implement a Worker Environmental Awareness Program.* An authorized biologist(s) shall conduct a detailed biological Worker Environmental Awareness Program (WEAP) for all Project personnel before any construction or activities within the Project footprint. The WEAP shall include discussions of Project permits and brief summaries of their conditions; discussions of agency involvement, their applicable sensitivity measures, and relevant environmental protection legislation (e.g., the Endangered Species Act, the Migratory Bird Treaty Act); descriptions of special-status species and other sensitive resources that could exist in the Project area, along with their locations, legal status and protections; and a review of all measures to be implemented for avoidance of these sensitive resources. The final list of wildlife species to be included in the WEAP may be reduced at the discretion of the biologist with concurrence from applicable agencies. 6a. Training materials and briefings shall also include the consequences of non-compliance with these acts; identification and values of plant and wildlife species and significant natural plant community habitats; fire protection measures; sensitivities of working on NFS and BLM lands and identification of USFS and BLM sensitive species; hazardous substance spill prevention and containment measures; a contact person in the event of the discovery of dead or injured wildlife; and review of mitigation requirements. Discussion of GPs and BMPs shall include topics such as appropriate work limits, avoiding the spread of non-native plant species, fire safety, wildlife avoidance, trash and debris collection, spill prevention and containment protocol, and appropriate protocol for passage and/or construction near riparian zones. Sightings of sensitive wildlife species or harmful encounters with any wildlife species shall be reported to the authorized biologist immediately for evaluation and, as necessary, reporting to agencies. 6b. Training materials and a course outline shall be provided to the USFS/BLM for review and approval at least 30 days before the start of construction. Maps showing the location of special-status wildlife, fish, or populations of rare plants, exclusion areas, or other construction limitations (e.g., limited operating periods) will be provided to the environmental monitors and construction crews before ground disturbance. 6c. The training shall be conducted for all crew members present for the start of construction. If new crew members are brought to the Project after this time, they shall take part in the WEAP before beginning construction work; if the authorized biologist is not available at this time, new crew members shall be given a summary handout of the WEAP until the full WEAP can be administered by the authorized biologist, to be conducted no more than one workweek following the crew members' assignment to the Project. All crew members who have completed the WEAP shall submit their names to a list to be updated continuously and furnished to agencies upon request. No construction worker may work in the field for more than five days without participating in the WEAP.	Modified for consistency with the Final Biological Assessment as submitted to USFWS	*Implement a Worker Environmental Awareness Program.* An authorized biologist(s) shall conduct a detailed biological Worker Environmental Awareness Program (WEAP) for all Project personnel before any construction or activities within the Project footprint. The WEAP shall include discussions of Project permits and brief summaries of their conditions; discussions of agency involvement, their applicable sensitivity measures, and relevant environmental protection legislation (e.g., the Endangered Species Act, the Migratory Bird Treaty Act); descriptions of special-status species and other sensitive resources that could exist in the Project area, along with their locations, legal status and protections; and a review of all measures to be implemented for avoidance of these sensitive resources. The final list of wildlife species to be included in the WEAP may be reduced at the discretion of the authorized biologist with concurrence from applicable agencies. 6a. Training materials and briefings shall also include the consequences of non-compliance with these acts; identification and values of plant and wildlife species and significant natural plant community habitats; fire protection measures; sensitivities of working on NFS and BLM lands and identification of USFS and BLM sensitive species; hazardous substance spill prevention and containment measures; a contact person in the event of the discovery of dead or injured wildlife; and review of mitigation requirements. Discussion of GPs and BMPs shall include topics such as appropriate work limits, avoiding the spread of non-native plant species, fire safety, wildlife avoidance, trash and debris collection, spill prevention and containment protocol, and appropriate protocol for passage and/or construction near riparian zones. Sightings of sensitive wildlife species or harmful encounters with any wildlife species shall be reported to the authorized biologist immediately for evaluation and, as necessary, reporting to agencies. 6b. Training materials and a course outline shall be provided to the USFS/BLM for review and approval at least 30 days before the start of construction. Maps showing the location of special-status wildlife, fish, or populations of rare plants, exclusion areas, or other construction limitations (e.g., limited operating periods) will be provided to the environmental monitors and construction crews before ground disturbance. 6c. The training shall be conducted for all crew members present for the start of construction. If new crew members are brought to the Project after this time, they shall take part in the WEAP before beginning construction work; if the authorized biologist is not available at this time, new crew members shall be given a summary handout of the WEAP until the full WEAP can be administered by the authorized biologist, to be conducted no more than one workweek following the crew members' assignment to the Project. All crew members who have completed the WEAP shall submit their names to a list to be updated continuously and furnished to agencies upon request. No construction worker may work in the field for more than five days without participating in the WEAP.
BIO-7	*Impacts to Raptors.* 7a. If Project construction activities cannot occur completely outside the bird breeding season, then pre-construction surveys for active nests shall be conducted by a qualified biologist within 1,200 feet of the construction zone no more than seven days before the initiation of construction that would occur between February 1 and August 15. The required survey dates may be modified based on local conditions (e.g., high altitude locations) with the approval of the CDFG, BLM, and/or USFS. LADWP shall be responsible for designating qualified biologists who can conduct pre-construction surveys and monitoring for breeding birds. The résumé of the proposed biologists will be provided to the BLM and USFS for concurrence before ground disturbance. If breeding birds with active nests are found, a biological monitor shall establish a species-specific buffer around the nest for ground-based construction activities and a one-mile buffer for helicopter use if helicopters are flying below 300 feet, and no activities will be allowed within the buffer(s) until the young have fledged from the nest or the nest fails. ~~If nest~~ ing bald or golden eagles are identified, a 660-foot no activity buffer will be	Yes	

Number	Mitigation Measure	Adopted - Yes/Modified	Modified Mitigation Measure
	implemented. The buffer (660-foot eagle and one-mile helicopter) may be adjusted to reflect existing conditions, including ambient noise, topography, and disturbance, with the approval of the U.S. Fish and Wildlife Service (USFWS), CDFG, BLM or USFS, as appropriate (USFS 2005). On NFS lands, the USFS shall apply the USFS Land Management Plan Standard S18 (Part 3 of the Land Management Plan), which states, "Protect known active and inactive raptor nest areas. Extent of protection will be based on proposed management activities, human activities existing at the onset of nesting initiation, species, topography, vegetative cover, and other factors. When appropriate, a no-disturbance buffer around active nest sites will be required from nest-site selection to fledging." If for any reason a bird nest must be removed during the nesting season, LADWP shall provide written documentation providing concurrence from the USFWS and CDFG authorizing the nest relocation. On NFS lands, this will include coordination and written approval from the USFS. On BLM lands, this will include coordination and written approval by the BLM. LADWP shall provide a written report documenting the relocation efforts. The report shall include what actions were taken to avoid moving the nest, the location of the nest, what species is being relocated, the number and condition of the eggs taken from the nest, the location of where the eggs are incubated, the survival rate, the location of the nests where the chicks are relocated, and whether the birds were accepted by the adopted parent. 7b. Before construction, LADWP shall identify all existing raptor nests that would be affected by Project construction. LADWP shall coordinate with the USFWS, CDFG, USFS and BLM for the proposed removal of nests that may present safety issues associated with the construction activities. All nest removals shall occur after the nest is demonstrated to be inactive by a qualified biologist and have been shown to not result in take as defined by the Migratory Bird Treaty Act (MBTA).		
BIO-8	*Avoid nesting season and limit disturbance of nesting birds.* LADWP shall conduct pre-construction surveys for nesting birds if construction and removal activities are scheduled to occur during the breeding season. Surveys shall be conducted in areas within 500 feet of tower sites, laydown/staging areas, substation sites, access/spur road locations, or any other area subject to ground disturbance. Surveys for birds shall be conducted for all areas from February 1 to August 15. The required survey dates may be modified based on local conditions (e.g., high altitude locations) with the approval of the CDFG and/or USFS. LADWP shall be responsible for designating qualified biologists who can conduct pre-construction surveys and monitoring for breeding birds. The résumé of the proposed biologists will be provided to the USFS for concurrence before ground disturbance. If breeding birds with active nests are found, a biological monitor shall establish a 300-foot buffer around the nest for ground-based construction activities and a one-mile buffer for helicopter use if helicopters are flying below 300 feet, and no activities will be allowed within the buffer(s) until the young have fledged from the nest or the nest fails. If nesting bald or golden eagles are identified, a 660-foot no activity buffer will be implemented. The 300-foot (or 660-foot eagle and one-mile helicopter) buffer may be adjusted to reflect existing conditions, including ambient noise, topography, and disturbance with the approval of the USFWS, CDFG, or USFS, as appropriate and in coordination with LADWP. On NFS lands, the USFS shall have the authority to define/redefine such buffers. The biological monitors shall conduct regular monitoring of the nest to determine success/failure and to ensure that Project activities are not conducted within the buffer(s) until the nesting cycle is complete or the nest fails. The biological monitors shall be responsible for documenting the results of the surveys and the ongoing monitoring and will provide a copy of the monitoring reports for impact areas to the respective agencies (e.g., on NFS lands documentation will be provided to the Forest Biologist). If for any reason a bird nest must be removed during the nesting season, LADWP shall provide written documentation providing concurrence from the USFWS and CDFG authorizing the nest relocation. On NFS lands, this will include coordination and written approval from the USFS. LADWP shall provide a written report documenting the relocation efforts. The report shall include what actions were taken to avoid moving the nest, the location of the nest, what species is being relocated, the number and condition of the eggs taken from the nest, the location of where the eggs are incubated, the survival rate, the location of the nests where the chicks are relocated, and whether the birds were accepted by the adopted parent.	Yes	

Number	Mitigation Measure	Adopted - Yes/Modified	Modified Mitigation Measure
BIO-11	*Reduce avian electrocutions/collisions on transmission lines.* Raptor safety protection will be required on tower/conductor (lines) in appropriate locations. The Project would have minimum clearance between phase conductors or between phase conductors and grounded hardware, as recommended by the Avian Power Line Interactive Committee (APLIC 2006), that are sufficient to protect even the largest birds, such as California condor, and therefore would present little to no risk of bird electrocution. New Project structures shall be designed to implement collision-reducing techniques as described in the latest version of the APLIC guidelines. Devices such as swan wrapping or other similar functioning devices may be required if areas are identified as being a hazard to birds. In addition, per General Practice (GP) 8, an Avian Protection Plan will be developed for this Project that will include avian collision protocols.	Modified for consistency with the Final Biological Assessment as submitted to USFWS	*Reduce avian electrocutions/collisions on transmission lines.* Raptor safety protection will be required on tower/conductor (lines) in appropriate locations. The Project would have minimum clearance between phase conductors or between phase conductors and grounded hardware, as recommended by the Avian Power Line Interactive Committee (APLIC 2006), that are sufficient to protect even the largest birds, such as California condor, and therefore would present little to no risk of bird electrocution. New Project structures shall be designed to implement collision-reducing techniques as described in the latest version of the APLIC guidelines. Devices such as swan wrapping or other similar functioning devices may be required if areas are identified as being a hazard to birds. In addition, per General Practice (GP) 8, an Avian Protection Plan will be developed for this Project that will include avian collision protocols.
BIO-13	*Protect special-status plant species and their habitat.* 13a. Conduct preconstruction surveys for State and federal Threatened, Endangered, Proposed, Petitioned, Candidate, USFS Sensitive, USFS Watch, BLM Sensitive, and California Native Plant Society (CNPS) listed plants and avoid any occurrences of these plants. LADWP shall conduct pre-construction surveys for State and federally listed Threatened and Endangered, Proposed, Petitioned, and Candidate plants in a 250-foot radius around all areas subject to ground-disturbing activity, including, but not limited to, tower pad preparation and construction areas, tower removal sites, pulling and tensioning sites, assembly yards, and areas subject to grading for new access roads. The surveys shall be conducted during the appropriate blooming period(s) by an authorized plant ecologist/biologist according to protocols established by the USFWS, CDFG, USFS, BLM, and CNPS. The résumé of the proposed biologists will be provided to the USFS and BLM for concurrence before ground disturbance. The completion of these surveys shall be coordinated with the federal land manager. All listed plant species found shall be marked and avoided. If a federally listed plant species cannot be avoided on private land, consultation with USFWS will occur. 13b. Before site grading, any populations of listed plant species identified during the surveys shall be protected by a buffer zone. The buffer zone shall be established around these areas and shall be of sufficient size to eliminate potential disturbance to the plants from human activity and any other potential sources of disturbance, including human trampling, erosion, and dust. The size of the buffer will depend upon the proposed use of the immediately adjacent lands, and include consideration of the plant's ecological requirements (e.g., sunlight, moisture, shade tolerance, edaphic physical and chemical characteristics) that are identified by a qualified plant ecologist and/or Forest botanist. At minimum, the buffer shrub species shall be equal to twice the drip line (i.e., two times the distance from the trunk to the canopy edge) to protect and preserve the root systems of the plant. The buffer for herbaceous species shall be, at minimum, 50 feet from the perimeter of the population or the individual. A smaller buffer may be established, provided there are adequate measures in place to avoid the take of the species, with the approval of the USFWS, CDFG, USFS, and BLM and in coordination with LADWP. If impacts to listed plants are determined to be unavoidable, the USFWS shall be consulted for authorization, through the context of a Biological Opinion. Additional mitigation measures to protect or restore listed plant species or their habitat may be required by the USFWS before impacts are authorized, whichever is appropriate. 13c. Impacts to non-listed plant species (i.e., USFS Sensitive, CNPS List 1,2 and 4 species) shall first be avoided where feasible, and, where not feasible, impacts shall be compensated through reseeding (with locally collected seed stock), or other USFS or BLM approved methods. For USFS lands, if the ANF determines Project activities will result in the loss of a significant portion of the known individuals of USFS Sensitive plant species, and reseeding/transplanting are not feasible options, LADWP shall preserve existing off-site occupied habitat that is not already part of the public lands in perpetuity at a 2:1 mitigation ratio (habitat preserved: habitat impacted).This ratio will apply only to specific acreage inhabited by special-status plant species that are removed during construction, and will supersede ratios listed in Table BIO-MM-1 regardless of habitat type. The determination of a significant rare plant population loss will be decided by the ANF botanist on a species and location basis, after available literature, research, and overall species distribution are reviewed. If avoidance, reseeding/transplanting, and, preservation of off-site habitat occupied by the impacted species are not found to be possible, the ANF will consider off-site restoration of degraded ANF lands and/or preservation of non-public lands with suitable habitat for the impacted species. The preserved habitat shall be of superior or similar habitat quality to the impacted areas in terms of soil features, extent of disturbance, habitat structure, and dominant species composition, as determined by a qualified plant ecologist. 13d. All special-status plant species impacted by Project activities shall be documented in an annual report and submitted to the federal land manager (USFS and BLM) until the success criteria outlined in the Habitat Restoration Plan are met. Where reseeding has occurred, LADWP shall track the success of the plants during the course of the annual restoration monitoring. This information shall be submitted as part of the annual report to the federal land manager	Modified for consistency with the Final Biological Assessment as submitted to USFWS	*Protect special-status plant species and their habitat.* 13a. Conduct preconstruction surveys for State and federal Threatened, Endangered, Proposed, Petitioned, Candidate, USFS Sensitive, USFS Watch, BLM Sensitive, and California Native Plant Society (CNPS) listed plants and avoid any occurrences of these plants. LADWP shall conduct pre-construction surveys for State and federally listed Threatened and Endangered, Proposed, Petitioned, and Candidate plants in a 250-foot radius around all areas subject to ground-disturbing activity, including, but not limited to, tower pad preparation and construction areas, tower removal sites, pulling and tensioning sites, assembly yards, and areas subject to grading for new access roads. The surveys shall be conducted during the appropriate blooming period(s) by an authorized plant ecologist/biologist according to protocols established by the USFWS, CDFG, USFS, BLM, and CNPS. The résumé of the proposed biologists will be provided to the USFS and BLM for concurrence before ground disturbance. The completion of these surveys shall be coordinated with the federal land manager. All listed plant species found shall be marked and avoided. 13b. Before site grading, any populations of listed plant species identified during the surveys shall be protected by a buffer zone. The buffer zone shall be established around these areas and shall be of sufficient size to eliminate potential disturbance to the plants from human activity and any other potential sources of disturbance, including human trampling, erosion, and dust. The size of the buffer will depend upon the proposed use of the immediately adjacent lands, and include consideration of the plant's ecological requirements (e.g., sunlight, moisture, shade tolerance, edaphic physical and chemical characteristics) that are identified by a qualified plant ecologist and/or Forest botanist. At minimum, the buffer shrub species shall be equal to twice the drip line (i.e., two times the distance from the trunk to the canopy edge) to protect and preserve the root systems of the plant. The buffer for herbaceous species shall be, at minimum, 50 feet from the perimeter of the population or the individual. A smaller buffer may be established, provided there are adequate measures in place to avoid the loss of the species, with the approval of the USFWS, CDFG, USFS, and BLM and in coordination with LADWP. If impacts to listed plants are determined to be unavoidable, USFWS will be contacted immediately and additional mitigation measures to protect or restore listed plant species or their habitat may be required by the USFWS before impacts are authorized, whichever is appropriate. 13c. Impacts to non-listed plant species (i.e., USFS Sensitive, CNPS List 1,2 and 4 species) shall first be avoided where feasible, and, where not feasible, impacts shall be compensated through reseeding (with locally collected seed stock), or other USFS or BLM approved methods. For USFS lands, if the ANF determines Project activities will result in the loss of a significant portion of the known individuals of USFS Sensitive plant species, and reseeding/transplanting are not feasible options, LADWP shall preserve existing off-site occupied habitat that is not already part of the public lands in perpetuity at a 2:1 mitigation ratio (habitat preserved: habitat impacted).This ratio will apply only to specific acreage inhabited by special-status plant species that are removed during construction, and will supersede ratios listed in Table BIO-MM-1 regardless of habitat type. The determination of a significant rare plant population loss will be decided by the ANF botanist on a species and location basis, after available literature, research, and overall species distribution are reviewed. If avoidance, reseeding/transplanting, and, preservation of off-site habitat occupied by the impacted species are not found to be possible, the ANF will consider off-site restoration of degraded ANF lands and/or preservation of non-public lands with suitable habitat for the impacted species. The preserved habitat shall be of superior or similar habitat quality to the impacted areas in terms of soil features, extent of disturbance, habitat structure, and dominant species composition, as determined by a qualified plant ecologist. 13d. For USFS species, special-status plant species impacted by Project activities shall be documented in an annual report and submitted to the federal land manager (USFS and BLM) until the success criteria outlined in the Habitat Restoration Plan are met. Where reseeding has occurred, LADWP shall track the success of the plants during the course of the annual restoration monitoring. This information shall be submitted as part of the annual report to the federal land manager (USFS and BLM).

Number	Mitigation Measure	Adopted - Yes/Modified	Modified Mitigation Measure
	(USFS and BLM).		
BIO-14	*Protect western yellow-billed cuckoo, southwestern willow flycatcher, least Bell's vireo, and their habitat.* 14a All Project activities taking place within suitable habitat for the western yellow-billed cuckoo, southwestern willow flycatcher, and least Bell's vireo shall be conducted from November through early March, which is a period outside their breeding seasons (Sedgwick 2000, Sogge 2000, Brown 1993, Kus 2002, Hughes 1999). If these activities cannot be avoided during the breeding season, the following measures shall apply: 14b If construction activities must occur during the breeding season in areas that have the potential to support listed riparian species, an authorized ornithologist shall conduct protocol surveys of the Project and adjacent areas within 500 feet to determine if this species is present within the area and to determine breeding status. USFWS protocol surveys will be conducted for southwestern willow flycatcher, least Bell's vireo, and western yellow-billed cuckoo (if no protocols exist, the appropriate land management agency will establish the protocols to be used). In known occupied habitat for listed riparian birds, LADWP shall only conduct focused surveys of the Project and adjacent areas within 500 feet. The surveys shall be of adequate duration to verify potential nest sites if work is scheduled to occur during the breeding season. If breeding is confirmed, the USFWS-recommended buffers will be applied and no activities will occur within that buffer. 14c Protocol or focused surveys, as appropriate, should be conducted within one year of start of construction. However, on NFS lands, annual surveys in suitable habitat may be required during construction. These surveys may be modified through the coordination with the USFWS, CDFG, USFS, LADWP and the BLM based on the condition of habitat, the observation of the species, or avoidance of riparian areas during the breeding season. 14d If a territory or nest is confirmed, the USFWS and CDFG shall be notified immediately. On NFS or BLM lands, these agencies would be notified immediately. In coordination with the USFWS, CDFG and the appropriate land management agency, a 300-foot disturbance-free buffer shall be established and demarcated by fencing or flagging. This buffer may be adjusted, provided noise levels do not exceed 60 dB(A) hourly Leq at the edge of the nest site as determined by an authorized biologist in coordination with a qualified acoustician. If the noise meets or exceeds the 60 dB(A) Leq threshold, or if the authorized biologist determines that the construction activities are disturbing nesting activities, the authorized biologist shall notify the construction manager, and the construction manager, in consultation with the biologist and USFS, has the authority to halt the construction and shall devise methods to reduce the noise and/or disturbance in the vicinity. This may include methods such as, but not limited to, turning off vehicle engines and other equipment whenever possible to reduce noise, installing a protective noise barrier between the nest site and the construction activities, and working in other areas until the young have fledged. If noise levels still exceed 60 dB(A) Leq hourly at the edge of nesting territories and/or a no-construction buffer cannot be maintained, construction shall be deferred in that area until the nestlings have fledged. All active nests shall be monitored on a weekly basis until the nestlings fledge. No construction or vehicle traffic shall occur within this buffer during the breeding season for these species. 14e The nest must be monitored by an authorized biologist during the construction activities. If the monitor determines that Project activities are disturbing or disrupting nesting activities, the monitor shall notify the construction manager, and the construction manager, in consultation with the biological monitor, has the authority to implement measures to reduce the noise and/or disturbance in the vicinity. 14f Because these species are State-listed as endangered by CESA, LADWP would apply for an ITP if take of any of these species is anticipated during Project construction.	Modified for consistency with the Final Biological Assessment as submitted to USFWS	*Protect western yellow-billed cuckoo, southwestern willow flycatcher, least Bell's vireo, and their habitat.* 14a All Project activities taking place within suitable habitat for the western yellow-billed cuckoo, southwestern willow flycatcher, and least Bell's vireo shall be conducted from November through early March, which is a period outside their breeding seasons (Sedgwick 2000, Sogge 2000, Brown 1993, Kus 2002, Hughes 1999). If these activities cannot be avoided during the breeding season, the following measures shall apply: 14b If construction activities must occur during the breeding season in areas that have the potential to support listed riparian species, an authorized ornithologist shall conduct protocol surveys of the Project and adjacent areas within 500 feet to determine if this species is present within the area and to determine breeding status. USFWS protocol surveys will be conducted for southwestern willow flycatcher, least Bell's vireo, and western yellow-billed cuckoo (if no protocols exist, the appropriate land management agency will establish the protocols to be used). In known occupied habitat for listed riparian birds, LADWP shall only conduct focused surveys of the Project and adjacent areas within 500 feet. The surveys shall be of adequate duration to verify potential nest sites if work is scheduled to occur during the breeding season. If breeding is confirmed, the USFWS-recommended buffers will be applied and no activities will occur within that buffer. 14c Protocol or focused surveys, as appropriate, should be conducted within one year of start of construction. However, on NFS lands, annual surveys in suitable habitat may be required during construction. These surveys may be modified through the coordination with the USFWS, CDFG, USFS, LADWP and the BLM based on the condition of habitat, the observation of the species, or avoidance of riparian areas during the breeding season. 14d If a territory or nest is confirmed, the USFWS and CDFG shall be notified immediately. On NFS or BLM lands, these agencies would be notified immediately. In coordination with the USFWS, CDFG and the appropriate land management agency, a 300-foot disturbance-free buffer shall be established and demarcated by fencing or flagging. This buffer may be adjusted, provided noise levels do not exceed 40 dB(A) hourly Leq at the edge of the nest site as determined by an authorized biologist in coordination with a qualified acoustician (Haas 2007). If the noise meets or exceeds the 40 dB(A) Leq threshold, or if the authorized biologist determines that the construction activities are disturbing nesting activities, the authorized biologist shall notify the construction manager, and the construction manager, in consultation with the authorized biologist and USFS, has the authority to halt the construction and shall devise methods to reduce the noise and/or disturbance in the vicinity. This may include methods such as, but not limited to, turning off vehicle engines and other equipment whenever possible to reduce noise, installing a protective noise barrier between the nest site and the construction activities, and working in other areas until the young have fledged. If noise levels still exceed 40 dB(A) Leq hourly at the edge of nesting territories and/or a no-construction buffer cannot be maintained, construction shall be deferred in that area until the nestlings have fledged. All active nests shall be monitored on a weekly basis until the nestlings fledge. No construction or vehicle traffic shall occur within this buffer during the breeding season for these species. 14e The nest must be monitored by an authorized biologist during the construction activities. If the monitor determines that Project activities are disturbing or disrupting nesting activities, the monitor shall notify the construction manager, and the construction manager, in consultation with the biological monitor, has the authority to implement measures to reduce the noise and/or disturbance in the vicinity. 14f Because these species are State-listed as endangered by CESA, LADWP would apply for an ITP if take of any of these species is anticipated during Project construction.
BIO-15	*Protect coastal California gnatcatcher and its habitat.* 15a. All Project activities taking place within suitable habitat for the coastal California gnatcatcher shall be conducted from September through February, which is a period outside their breeding season. If these activities cannot be avoided during the breeding season, the following measures shall apply: 15b. LADWP shall conduct protocol surveys for coastal California gnatcatchers in areas supporting coastal sage scrub habitat that may be affected by the Project. In known occupied habitat for the California gnatcatcher, LADWP shall only conduct focused surveys for coastal California gnatcatchers. Survey areas shall include a 500-foot buffer around Project disturbance areas. 15c. If a territory or nest is confirmed, the USFWS shall be notified immediately; on NFS or BLM lands, these agencies would also be notified immediately. In coordination with the USFWS and the appropriate land management agency, a 300-foot disturbance-free buffer shall be established and demarcated by fencing or flagging. This buffer may be adjusted, provided noise levels do not exceed 60 dB(A)hourly Leq at the edge of the nest site as determined by an authorized qualified biologist in coordination with a qualified acoustician. If the noise meets or exceeds the 60 dB(A)	Modified for consistency with the Final Biological Assessment as submitted to USFWS	*Protect coastal California gnatcatcher and its habitat.* 15a. All Project activities taking place within suitable habitat for the coastal California gnatcatcher shall be conducted from September through February, which is outside their breeding season. If these activities cannot be avoided during the breeding season, the following measures shall apply: 15b. LADWP shall conduct protocol surveys for coastal California gnatcatchers in areas supporting coastal sage scrub habitat that may be affected by the Project. In known occupied habitat for the California gnatcatcher, LADWP shall only conduct focused surveys for coastal California gnatcatchers. Survey areas shall include a 500-foot buffer around Project disturbance areas. 15c. If a territory or nest is confirmed, the USFWS shall be notified immediately; on NFS or BLM lands, these agencies would also be notified immediately. In coordination with the USFWS and the appropriate land management agency, a 300-foot disturbance-free buffer shall be established and demarcated by fencing or flagging. This buffer may be adjusted, provided noise levels do not exceed 60 dB(A)hourly Leq at the edge of the nest site as determined by an authorized biologist in coordination with a qualified acoustician. If the noise meets or exceeds the 60 dB(A) Leq

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	Leq threshold, or if the authorized biologist determines that the construction activities are disturbing nesting activities, the authorized biologist shall notify the construction manager, and the construction manager, in consultation with the authorized biologist, has the authority to halt the construction and shall devise methods to reduce the noise and/or disturbance in the vicinity. This may include methods such as, but not limited to, turning off vehicle engines and other equipment whenever possible to reduce noise, installing a protective noise barrier between the nest site and the construction activities, and working in other areas until the young have fledged. If noise levels still exceed 60 dB(A) Leq hourly at the edge of nesting territories and/or a no-construction buffer cannot be maintained, construction shall be deferred in that area until the nestlings have fledged. All active nests shall be monitored on a weekly basis until the nestlings fledge. No Project activities may occur in these areas unless otherwise authorized by USFWS. LADWP shall obtain incidental take authorization from the USFWS before further activities. 15d. Protocol or focused surveys, as appropriate, shall be conducted, at a minimum, within one year of start of construction. These surveys may be modified through the coordination with the USFS, BLM, and CDFG based on the condition of habitat, the observation of the species, or avoidance of nesting areas during the breeding season. 15e. Construction activities in occupied gnatcatcher habitat will be monitored by a full-time authorized biologist. The monitoring shall be of a sufficient intensity to ensure that the biologist could detect the presence of a bird in the construction area. At a minimum, one full-time monitor shall be present for every two miles of active construction within occupied habitat. The monitors shall notify the construction manager, and the construction manager. in consultation with the biologist, will have the authority to halt all activities until appropriate corrective measures have been completed.		threshold, or if the authorized biologist determines that the construction activities are disturbing nesting activities, the authorized biologist shall notify the construction manager, and the construction manager, in consultation with the authorized biologist, has the authority to halt the construction and shall devise methods to reduce the noise and/or disturbance in the vicinity. This may include methods such as, but not limited to, turning off vehicle engines and other equipment whenever possible to reduce noise, installing a protective noise barrier between the nest site and the construction activities, and working in other areas until the young have fledged. If noise levels still exceed 60 dB(A) Leq hourly at the edge of nesting territories and/or a no-construction buffer cannot be maintained, construction shall be deferred in that area until the nestlings have fledged. All active nests shall be monitored on a weekly basis until the nestlings fledge. No Project activities may occur in these areas unless otherwise authorized by USFWS. LADWP shall obtain incidental take authorization from the USFWS before further activities. 15d. Protocol or focused surveys, as appropriate, shall be conducted, at a minimum, within one year of start of construction. These surveys may be modified through the coordination with the USFS, BLM, and CDFG based on the condition of habitat, the observation of the species, or avoidance of nesting areas during the breeding season. 15e. Construction activities in occupied gnatcatcher habitat will be monitored by a full-time authorized biologist. The monitoring shall be of a sufficient intensity to ensure that the authorized biologist could detect the presence of a bird in the construction area. At a minimum, one full-time monitor shall be present for every two miles of active construction within occupied habitat. The monitors shall notify the construction manager, and the construction manager, in consultation with the authorized biologist, will have the authority to halt all activities until appropriate corrective measures have been completed.
BIO-16	*Protect burrowing owl.* The following measures are proposed to minimize the potential for take of burrowing owl nests during construction associated with the proposed Project. 16a Preconstruction surveys will be conducted throughout the Project site and laydown areas for burrowing owls, possible burrows, and sign of owls (e.g., pellets, feathers, white wash). 16b Occupied burrows will not be disturbed during the breeding season (February 1 through August 31) unless an approved biologist verifies, through non-invasive methods, that both 1) the birds have not begun egg-laying and incubation, and 2) that juveniles from the occupied burrow are foraging independently and are capable of independent survival. 16c Occupied burrows will be protected with a 600-foot buffer, if possible. 16d When the destruction of an occupied burrow is unavoidable, the owl(s) will be passively relocated in accordance with the CDFG memo dated October 17, 1995. Relocation efforts will occur at least one week before ground disturbance of the area. A biologist will monitor the success of the relocation. A monitoring plan will be submitted to and approved by CDFG and BLM.	Yes	
BIO-17	*Protect the bald eagle and golden eagle.* 17a If construction occurs during bald eagle and golden eagle breeding season, preconstruction surveys shall be conducted, in accordance with USFWS protocol requirements, for the Project area in regions with suitable habitat. Any active nests shall have an appropriate exclusion buffer established. This buffer shall be established based on existing conditions in consultation with the LADWP, USFS, BLM, CDFG and/or USFWS. 17b Whenever bald eagles and golden eagles are observed within 100 yards of the construction area, construction shall be halted and shall not resume until the eagles leave. 17c If a helicopter will be used for construction or maintenance, the aircraft must be no closer than 1,000 feet vertical or horizontal distance from communal roost sites.	Yes	
BIO-18	*Protect California condor.* 18a For all Project activities taking place immediately adjacent to or within known condor-occupied areas, a qualified biologist will monitor all construction activities and assist LADWP in the implementation of the monitoring program. The résumé of the proposed biologist(s) will be provided to the BLM and USFS for concurrence. This biologist(s) will be referred to as the authorized biologist hereafter. The authorized biologist will be present during all activities immediately adjacent to or within known condor-occupied areas. The authorized biologist shall notify the construction manager, and the construction manager, in consultation with the biologist, will have the authority to halt all activities until appropriate corrective measures have been completed. If condors are observed in helicopter construction areas, LADWP shall avoid further helicopter use until the animals have left the area. The authorized biologist will have radio contact with the Project foreman, who will be in radio contact with the helicopter pilot. The biologist will provide information to LADWP to avoid conflicts with condors. All condor sightings in the Project area will be reported to the	Modified for consistency with the Final Biological Assessment as submitted to USFWS	*Protect California condor.* 18a For all Project activities taking place immediately adjacent to or within known condor-occupied areas, an authorized biologist will monitor all construction activities and assist LADWP in the implementation of the monitoring program. The résumé of the proposed biologist(s) will be provided to the BLM and USFS for approval. This biologist(s) will be referred to as the authorized biologist hereafter. The authorized biologist will be present during all activities immediately adjacent to or within known condor-occupied areas. The authorized biologist shall notify the construction manager, and the construction manager, in consultation with the authorized biologist, will have the authority to halt all activities until appropriate corrective measures have been completed. If condors are observed in helicopter construction areas, LADWP shall avoid further helicopter use until the animals have left the area. The authorized biologist will have radio contact with the Project foreman, who will be in radio contact with the helicopter pilot. The authorized biologist will provide information to LADWP to avoid conflicts with condors. All condor sightings in the

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	USFWS and USFS (on NFS lands). LADWP will coordinate with USFWS on the construction schedule and helicopter work areas to determine if any condors have been tracked or observed in the vicinity of the Project area. If condors are observed in helicopter construction areas, LADWP shall avoid further helicopter use until the animals have left the area and the USFWS will be notified immediately. Should condors be found roosting within 0.5 mile of the construction area, no construction activity shall occur between one hour before sunset to one hour after sunrise, or until the condors leave the area. Should condors be found nesting within 1.5 miles of the construction area, no construction activity will occur until further authorization from the USFWS and USFS (on NFS lands). 18b Microtrash. All trash is required to be disposed of as written in the Proper Disposal of Construction Waste Plan for the Project. Additional language has been added to this Plan to address the disposal of microtrash. Workers will be trained on the issue of microtrash – what it is, its potential effects to California condors, and how to avoid the deposition of microtrash. In addition, all workers will properly dispose of their trash throughout the day and daily sweeps of the work area will occur to collect and remove trash in locations with the potential for California condors to occur. 18c California Condor Worker Education Program. LADWP will develop a flyer that will be distributed to all workers on the Project concerning information on the California condor. Information to be included consists of the following: species description with photos and/or drawings indicating how to identify the California condor and how to distinguish condors from turkey vultures and golden eagles; protective status and penalties for violation of the Endangered Species Act; avoidance measures being implemented on the Project; and contact information for communicating condor sightings. 18d Reporting. All California condor sightings in the Project area will be reported directly to the USFWS, USFS, and BLM (as appropriate). Before commencement of helicopter activity, LADWP will coordinate with a USFWS condor biologist to determine if any condors have been tracked or observed in the vicinity of the Project area.		Project area will be reported to the USFWS, BLM (on private lands), and USFS (on NFS lands). LADWP will coordinate with USFWS on the construction schedule and helicopter work areas to determine if any condors have been tracked or observed in the vicinity of the Project area. If condors are observed in helicopter construction areas, LADWP shall avoid further helicopter use until the animals have left the area and the USFWS will be notified immediately. Should condors be found roosting within 0.5 mile of the construction area, no construction activity shall occur between one hour before sunset to one hour after sunrise, or until the condors leave the area. Should condors be found nesting within 1.5 miles of the construction area, all construction activity will cease and the USFWS will be notified immediately. 18b Microtrash. All trash is required to be disposed of as written in the Proper Disposal of Construction Waste Plan for the Project. Additional language has been added to this Plan to address the disposal of microtrash. Workers will be trained on the issue of microtrash – what it is, its potential effects to California condors, and how to avoid the deposition of microtrash. In addition, all workers will properly dispose of their trash throughout the day and daily sweeps of the work area will occur to collect and remove trash in locations with the potential for California condors to occur. 18c California Condor Worker Education Program. LADWP will develop a flyer that will be distributed to all workers on the Project concerning information on the California condor. Information to be included consists of the following: species description with photos and/or drawings indicating how to identify the California condor and how to distinguish condors from turkey vultures and golden eagles; protective status and penalties for violation of the Endangered Species Act; avoidance measures being implemented on the Project; and contact information for communicating condor sightings. 18d Reporting. All California condor sightings in the Project area will be reported directly to the USFWS, USFS, and BLM (as appropriate). Before commencement of helicopter activity, LADWP will coordinate with a USFWS condor biologist to determine if any condors have been tracked or observed in the vicinity of the Project area.
BIO-20	*Protect American badger, Mohave ground squirrel, Tehachapi pocket mouse, and kit fox.* 20a. In areas identified as suitable habitat during the 2008 surveys, preconstruction surveys will occur for badgers, ground squirrels, pocket mice, and kit foxes. If present and feasible, construction would be avoided in or adjacent to occupied habitat during breeding season. 20b. LADWP will consult with CDFG to see if a 2081 Permit for incidental take of Mohave Ground Squirrel is required.	Yes	
BIO-21	*Protect sensitive bat species.* 21a LADWP shall conduct a pre-construction survey (e.g., vegetation removal, grading) for roosting bats within 200 feet of Project activities within 15 days before any grading of rocky outcrops or removal of trees (particularly trees 12 inches in diameter or greater than 4.5 feet above-grade with loose bark or other cavities). 1) LADWP shall also conduct surveys for roosting bats during the maternity season (March 1 to July 31) within 300 feet of Project activities. Trees, rocky outcrops, and mine features shall be surveyed by a qualified bat biologist (i.e., a biologist holding a CDFG collection permit and a Memorandum of Understanding with CDFG allowing the biologist to handle bats). Surveys duration shall be a minimum of one day and one evening. The résumé of the biologist shall be provided to the USFS and BLM (as appropriate) for concurrence before any Project activities. 2) If active maternity roosts or hibernacula are found, the rock outcrop or tree occupied by the roost shall be avoided (i.e., not removed) by the Project, if feasible. If avoidance of the maternity roost is not feasible, the bat biologist shall survey (through the use of radio telemetry or other CDFG/USFS/BLM approved methods) for nearby alternative maternity colony sites. If the bat biologist determines, in consultation with and with the approval of the CDFG, USFS, and BLM (as appropriate), that there are alternative roost sites used by the maternity colony and young are not present, no further action is required, and it will not be necessary to provide alternative roosting habitat (i.e., Mitigation Measure BIO-21b would not apply, although Mitigation Measure BIO-21c would still apply). However, if there are no alternative roost sites used by the maternity colony, Mitigation Measure BIO-21b is required. If no active roosts are found, no further action is required. If active maternity roosts are absent, but a hibernaculum (i.e., a non-maternity roost) is present, Mitigation Measure BIO-21b is not necessary, but Mitigation Measure BIO-21c is required. 21b Provision of substitute roosting bat habitat. If a maternity roost will be impacted by the Project, and no alternative maternity roosts are in use near the site, substitute roosting habitat for the maternity colony shall be provided on, or close to, the Project site no less than three months before the eviction of the colony. Alternative roost sites will be constructed in accordance with the specific bats' requirements in coordination with CDFG and ANF. By making the roosting habitat available before eviction (Mitigation Measure BIO-21c), the colony will have a better chance of finding and using the roost. Large concrete walls (e.g., on bridges) on south or southwestern slopes that are retrofitted with	Yes	

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	slots and cavities are an example of structures that may provide alternative roosting habitat appropriate for maternity colonies. Alternative roost sites must be of comparable size and proximal in location to the impacted colony. The appropriate agencies shall also be notified of any hibernacula or active nurseries within the construction zone. Construction will not proceed in proximity of active hibernacula or nurseries until approved by appropriate agencies. Exclude bats before demolition of roosts. If non-breeding bat hibernacula are found in towers or trees scheduled to be removed or in crevices in rock outcrops within the grading footprint, the individuals shall be safely evicted upon the approval of appropriate agencies and under the direction of a qualified bat biologist, by opening the roosting area to allow airflow through the cavity or other means determined appropriate by the bat biologist (e.g., installation of one-way doors). The résumé of the bat biologist shall be provided to the CDFG, USFS, and BLM (as appropriate) for concurrence before any Project activities. In situations requiring one-way doors, a minimum of one week shall pass after doors are installed, and temperatures should be sufficiently warm for bats to exit the roost, because bats do not typically leave their roost daily during winter months in southern coastal California. This action should allow all bats to leave during the course of one week. Roosts that need to be removed in situations where the use of one-way doors is not necessary in the judgment of the qualified bat biologist shall first be disturbed by various means at the direction of the bat biologist at dusk to allow bats to escape during the darker hours, and the roost tree shall be removed or the grading shall occur the next day (i.e., there shall be no less or more than one night between initial disturbance and the grading or tree removal). 1) If an active maternity roost is in an area to be impacted by the Project, and alternative roosting habitat is available, the demolition of the roost site must commence before maternity colonies form (i.e., before March 1) or after young are flying (i.e., after July 31) using the exclusion techniques described above. 21c Survey for bat nursery colonies. A CDFG-approved biologist shall conduct a habitat assessment for bat nursery colonies before any construction activity. The approved biologist shall then conduct a survey for bat nursery colonies or signs of such colonies before construction. Direct impacts to a nursery colony site shall not be allowed, and approach of, or entrance to, an active nursery colony site shall be prohibited. Before any blasting or drilling in the vicinity of a nursery colony site, the CDFG-approved biologist shall work with the construction crew to devise and implement methods to minimize potential indirect impacts to the nursery colony site from falling rock or substantial vibration (while a nursery colony is active). The methods shall include an option to halt any construction activity that would cause falling rock, substantial vibration impacts, or any other construction-related impact to a nursery colony as determined by the approved biologist, until the colony is inactive. Should falling rock block the entrance to a nursery colony site, the contractor shall work with the approved biologist to reopen an entrance to the site. 21d If habitat must be removed for construction to continue, a two-step removal process will be implemented. The two-step removal process will involve permitted biologists to alter the habitat outside of the season of use (i.e., outside of hibernating/maternity season) to make the habitat less suitable, and the following day the habitat will be removed under the supervision of the permitted biologist.		
BIO-22	*Protect special-status herpetofauna.* An authorized biologist with demonstrated expertise with special-status herpetofauna shall monitor all construction activities and assist LADWP in the implementation of the monitoring efforts. The résumé of the proposed biologist will be provided to the USFS or BLM (as appropriate) for concurrence before the onset of ground-disturbing activities. The authorized biologist will be present during ground-disturbing activities immediately adjacent to or within habitat that supports populations of the special-status herpetofauna. Any special-status herpetofauna found within a Project impact area shall be captured by the authorized biologist and relocated to suitable habitat outside the impact area. If the installation of exclusion fencing is deemed necessary by the authorized biologist, the authorized biologist will direct the installation of the fence. Exclusion fencing will only be used for special-status herpetofauna that are not protected by CESA, unless specifically authorized by an ITP, or are not considered Fully Protected Species under Fish and Game Code or Title 14 of the CCR. Clearance surveys for special-status herpetofauna shall be conducted by the authorized biologist before the initiation of construction each day. Authorized non-federal biologists will have the appropriate CDFG scientific collection permit.	Modified for consistency with the Final Biological Assessment as submitted to USFWS	*Protect special-status reptile species.* An authorized biologist with demonstrated expertise with special-status herpetofauna shall monitor all construction activities and assist LADWP in the implementation of the monitoring efforts. The résumé of the proposed biologist will be provided to the USFS or BLM (as appropriate) for concurrence before the onset of ground-disturbing activities. The authorized biologist will be present during ground-disturbing activities immediately adjacent to or within habitat that supports populations of the special-status herpetofauna. Any special-status herpetofauna found within a Project impact area shall be salvaged by the authorized biologist and relocated to suitable habitat outside the impact area. If the installation of exclusion fencing is deemed necessary by the authorized biologist, the authorized biologist will direct the installation of the fence. Exclusion fencing will only be used for special-status herpetofauna that are not protected by CESA, unless specifically authorized by an ITP, or are not considered Fully Protected Species under Fish and Game Code or Title 14 of the CCR. Clearance surveys for special-status herpetofauna shall be conducted by the authorized biologist before the initiation of construction each day.

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BIO-23	*Protect desert tortoise and habitat loss.* 23a In areas of suitable desert tortoise habitat, preconstruction clearance surveys according to USFWS protocol will be conducted by authorized biologists. Surveys will be conducted by an authorized biologist and will provide 100 percent coverage of all areas to be disturbed during construction. All desert tortoise burrows and burrows constructed by other species that might be used by desert tortoises will be examined to assess occupancy of each burrow by desert tortoises and processed in accordance with the current USFWS guidelines (USFWS 2009d). If tortoise is observed or sign is found, construction activities will be monitored by a biologist authorized by the USFWS. If no tortoise sign is found, monitoring by an authorized biologist would not be required. Should a tortoise wander into non-monitored construction sites, all ground-disturbing activities will stop and a biologist approved to handle desert tortoise will be called to the site to move the tortoise out of harm's way, and the remainder of construction in desert tortoise habitat shall be monitored by an authorized biologist. 23b Vehicular traffic during construction in desert tortoise habitat will be confined to existing routes of travel to and from the Project site, and cross-country vehicle and equipment use outside designated work areas will be prohibited. Where new access is required outside of existing roads (e.g., new spur roads) or the construction zone, the route will be clearly marked (i.e., flagged and/or staked) prior to the onset of construction and desert tortoise clearance surveys will be conducted. During the desert tortoise active season (March to May and September to October), speed limits along Project roads shall be limited to 15 mph in desert tortoise habitat. 23c Burrows within the construction zone or along access routes shall be flagged by the authorized biologist so that the qualified biologist would be able to more easily locate them during construction. The authorized biologist shall be on-site to monitor all construction that occurs in the vicinity of flagged burrows and to ensure that desert tortoise impacts are avoided during Project construction. All desert tortoise burrows or pallets in the construction area shall be excavated by the USFWS-authorized biologist if they cannot be avoided by Project realignment. The construction area includes the expansion area of the Barren Ridge Switching Station (235 feet) and 500 feet total or 250 feet on either side of the new 230 kV transmission line. The 250 feet on either side of the transmission line account for the access roads, spur roads, tower assembly, and installation. The staging sites and concrete batch plants will not be placed within the desert tortoise habitat. 23d Desert tortoises that are found above ground in active construction areas shall be placed out of harm's way in the shade of a shrub or other cover location by the USFWS and BLM-authorized biologist. Any desert tortoise removed from burrows shall be placed in an unoccupied burrow of approximately the same size as the one from which it was removed. Tortoises shall not be placed more than 1,000 feet from where they were found. If an existing burrow is unavailable, the authorized biologist shall construct or direct the construction of a burrow of similar size, shape, depth, and orientation as the original burrow. Desert tortoises moved during inactive periods would be monitored for at least one week after placement in the new burrows to ensure their safety. of its own accord, activities would be halted until the authorized biologist is able to move it out of harm's way. 23e Any time a vehicle is parked, the ground around and under the vehicle shall be inspected for desert tortoises before the vehicle is moved. If a desert tortoise is observed, it shall be left to move on its own. If the tortoise does not move within 15 minutes, the authorized biologist shall relocate the tortoise out of harm's way, but no more than 1,000 feet from its original location. Moving desert tortoise from harm's way will only occur on the transmission line portions of the Project. A desert tortoise translocation plan may be needed if desert tortoises are found within the Barren Ridge Switching Station expansion site; the authorized biologist shall contact the USFWS for guidance on developing this plan. 23f Within potential desert tortoise habitat areas, vehicles shall not exceed 20 miles per hour on access roads during the period of highest desert tortoise activity (March 1 through October 31). 23g Tower foundations or other excavations that pose a potential to entrap or injure desert tortoise shall be inspected three times daily until the foundation or other structure is in place and the excavation is filled in. Excavations also will include an escape ramp. 23h The Project Worker Environmental Awareness Program (WEAP) will include information on desert tortoise. The program will be presented to all personnel who will be onsite at any time, including but not limited to contractors, contractors' employees, supervisors, inspectors, and subcontractors. This program will be presented in English and Spanish, if appropriate, and contain information concerning the biology and distribution of the desert tortoise as it is relevant to the Proposed Action, its legal status and occurrence in the proposed Project area, the definition of "take" and associated penalties, the terms and conditions of this biological opinion, measures designed to minimize the effects of construction activities, the means by which employees can facilitate this process, and reporting requirements to be implemented when tortoises are encountered or in cases of non-compliance with the Biological Opinion. The	Modified for consistency with the Final Biological Opinion issued by USFWS	*Protect desert tortoise and prevent habitat loss.* 23a Preconstruction clearance surveys of the construction area will be conducted by authorized biologists for desert tortoises within suitable habitat. Preconstruction surveys will be conducted within 24 hours prior to construction activities. Surveys will be conducted by an authorized biologist and will provide 100 percent coverage of all areas to be disturbed during construction. All desert tortoise burrows and burrows constructed by other species that might be used by desert tortoises will be examined to assess occupancy by desert tortoises and processed in accordance with the Service's (2009) current guidelines. Construction activities north of Backus Road will be monitored by an authorized biologist. If desert tortoises are observed prior to or during construction south of Backus Road, LADWP will assign an authorized desert tortoise biologist to implement the appropriate protective measures in that local area until the animal leaves or work activities have concluded. 23b In desert tortoise habitat, vehicular traffic during construction , operations, and maintenance will be confined to existing routes of travel to and from the project site and BRRTP facilities (maintenance yards, switchyards, material sites), and cross-country vehicle and equipment use outside of project construction and facility areas will be prohibited. Where new access is required outside of existing roads (e.g., new spur roads) or the construction zone, the route will be clearly marked (i.e., flagged and/or staked) prior to the onset of construction. 23c Burrows within the construction zone (but outside the construction area) will be flagged by the authorized biologist so that the authorized biologist would be able to more easily locate them during construction; flagging will be removed at the conclusion of construction. The authorized biologist will be on-site to monitor all construction that occurs in the vicinity of flagged burrows and to watch for desert tortoises. The authorized biologist may direct the installation of fencing to exclude desert tortoises from construction areas with the concurrence of the BLM's lead biologist on public lands or the Service on non-BLM lands; where such fencing is installed, the lead BLM biologist or Service contact may determine that an authorized biologist need not remain at that specific site. All desert tortoise burrows or pallets in construction areas will be excavated by the Service-authorized biologist. 23d Desert tortoises that are found above-ground during construction and need to be moved from potential harm will be placed in the shade of a shrub by the Service-authorized biologist. Any desert tortoise removed from burrows will be placed in an unoccupied burrow of approximately the same size as the one from which it was removed. The authorized biologist will move the desert tortoise to a distance that she/he considers to be safe; desert tortoises will not be moved more than 1,000 feet from the point of capture. If an existing burrow is unavailable, the authorized biologist will construct a burrow of similar size, shape, depth, and orientation as the original burrow. Desert tortoises moved during inactive periods will be monitored for at least 2 days after placement in the new burrows to ensure their safety. The authorized biologists will use their judgment and discretion to ensure that the survival of the desert tortoise is likely. 23e If a desert tortoise is in a construction or maintenance area and is not moving, adjacent activities would be halted until the authorized biologist is able to move it out of harm's way. Any desert tortoises in this situation will be moved as described in measure 23d. 23f Any time during construction, operation, and maintenance that a vehicle is parked, the ground around and under the vehicle will be inspected for desert tortoises before the vehicle is moved. If a desert tortoise is observed, it will be left to move on its own. If this does not occur within 15 minutes, the authorized biologist will remove and relocate the desert tortoise out of harm's way, as described in measure 23d. Authorized biologists will follow current Service desert tortoise handling guidelines at all times. 23g During construction, operation, and maintenance within potential desert tortoise habitat areas, vehicles will not exceed 20 miles per hour on access roads during periods of increased desert tortoise activity. Generally, these periods are from March 1 through October 31; however, unseasonably warm weather and rainfall at any time of the year may cause desert tortoises to increase their activity. The authorized biologist and BLM's lead biologist (on BLM lands) or Service contact (on non-BLM lands) will determine additional times when speed limits are necessary, based on conditions at the time. 23h Tower foundations or other excavations that pose a potential to entrap or injure desert tortoises will be inspected three times daily until the foundation or other structure is in place. Excavations also will include an escape ramp. In response to a comment on the draft biological opinion, we have added the specifications for the escape ramps. The ramps will be wide enough and at a slope for a large desert tortoise to ascend easily. The ramp will also be constructed of materials that will allow desert tortoises adequate traction. The authorized biologist will be responsible for assisting in the design of ramps; before any excavation or foundation is left unattended, the authorized biologist will conduct a final inspection to ensure that the ramps are capable of allowing the passage of desert tortoises. 23i A desert tortoise education program will be presented by an authorized biologist to all personnel who will be onsite at

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	name of each individual trained will be recorded on a sign-in sheet and will become part of the environmental compliance permanent record. 23i A litter-control program will be implemented to reduce the attractiveness of the area to opportunistic desert tortoise predators such as desert kit fox, coyotes, and common ravens. Trash and food items will be disposed of properly in predator-proof containers with re-sealing lids. Trash containers will be emptied, and construction waste will be removed daily from the Project area and disposed of in an approved landfill. 23j LADWP shall report any observations of raven predation on desert tortoises in the Project area to CDFG and USFWS. In construction areas that are heavily used and in potentially occupied desert tortoise habitat, work and staging areas, including the locations of the transmission line under construction, may be fenced with approved temporary desert tortoise exclusion fencing in a manner that prevents equipment and vehicles from straying from the designated work area into adjacent habitat. An authorized biologist will assist in determining the boundaries of the area to be fenced in consultation with the USFWS, CDFG, and with the BLM when construction areas are within lands administered by the BLM. All workers will be advised that equipment and vehicles must remain within the fenced work areas. Installation of the fencing and any necessary surveys will be directed or conducted by an authorized biologist. The fencing will remain in place for the duration of construction activities at a particular location and will be removed when construction activities are complete. 1. Temporary fencing should consist of 1-inch mesh or 1-inch horizontal by 2-inch vertical mesh (hardware, cloth or plastic) and be installed flush with the ground and extend at least 18 inches above-ground. Temporary tortoise-proof fencing should not be buried. In areas of high rodent activity where plastic mesh is used, temporary fencing may need more frequent monitoring to ensure no breaches exist. A desert tortoise authorized biologist will inspect the fencing on a biweekly basis to ensure that no holes develop that could allow desert tortoises to enter the work areas. If holes are found, they will be repaired immediately. 2. If a desert tortoise is found within an area that has been fenced to exclude them, activities will cease until an authorized biologist moves it out of harm's way outside of the fence, no greater than 500 meters away from its original location. At this time, the fencing will be inspected for holes, and any breaches in the fence will be immediately repaired. 23k No pets or firearms will be permitted in the work area.		any time during project construction, operation, and maintenance conducted in potential desert tortoise habitat. This includes, but is not limited to contractors, contractors' employees, supervisors, inspectors, and subcontractors. This program will be presented in English and Spanish, if appropriate, and contain information concerning the biology and distribution of the desert tortoise as it is relevant to the proposed action, its legal status and occurrence in the proposed project area, the definition of "take" and associated penalties, the terms and conditions of this biological opinion, measures designed to minimize the effects of construction, operation, and maintenance, the means by which employees can facilitate protection of the desert tortoise, and reporting requirements to be implemented when desert tortoises are encountered. The name of each individual trained will be recorded on a sign-in sheet. 23j A litter-control program will be implemented during construction, operation, and maintenance to reduce the attractiveness of the area to opportunistic predators such as the kit fox (Vulpes macrotis), coyote (Canis latrans), and common raven (Corvus corax). Trash and food items will be disposed of properly in predator-proof containers with re-sealing lids. Trash containers will be emptied, and construction waste will be removed daily from the project area and disposed of in an approved landfill. LADWP will report any observations of predation on desert tortoises in the project area to the Service; while operating on public lands, LADWP will also report this information to BLM. 23k All construction and staging areas will be delimited by flagging and/or staking. In areas of potentially occupied desert tortoise habitat, construction and staging areas, , may be fenced with approved temporary desert tortoise exclusion fencing in a manner that prevents equipment and vehicles from straying from within the marked boundary of work and staging areas into adjacent habitat. An authorized biologist will assist in determining the boundaries of the area to be fenced. When construction areas are within public lands, the authorized biologist will coordinate with BLM regarding this decision; on lands not managed by the BLM, the authorized biologist will contact the Service. All workers will be advised that equipment and vehicles must remain within the fenced work areas. Installation of the fencing and any necessary surveys will be directed or conducted by an authorized biologist. The fencing will remain in place for the duration of construction activities at a particular location and will be removed when construction activities are complete. 1. Temporary fencing will consist of 1-inch mesh or 1-inch horizontal by 2-inch vertical mesh (hardware, cloth or plastic) and be installed flush with the ground and extend at least 18 inches above-ground. Temporary desert tortoise-proof fencing need not be buried but will be installed to ensure no gaps exist between the fence and ground. In areas of high rodent activity where plastic mesh is used, temporary fencing may need more frequent monitoring to ensure no breaches exist. A desert tortoise authorized biologist will inspect the fencing on a weekly basis to ensure that no holes develop that could allow desert tortoises to enter the work areas. If holes are found, they will be repaired immediately. 2. If a desert tortoise is found within an area that has been fenced to exclude them, activities will cease until an authorized biologist moves it out of harm's way outside of the fence, as described in measure 23d. At this time, the fencing will be inspected for holes. 23l No pets or firearms, other than those of law enforcement personnel, will be permitted within the project right-of-way at any time during construction, operation, and maintenance of the project.
BIO-24	*Protect arroyo toad and California red-legged frog.* 24a LADWP shall conduct USFWS-approved protocol surveys for arroyo toads and California red-legged frogs at all locations containing suitable habitat near the proposed construction sites within two years before the start of construction. 24b If arroyo toads are detected, further surveys within the area will not be required and the avoidance measures detailed below will be followed. If no arroyo toads are detected, habitat assessments will be performed on a yearly basis to determine if the area continues to provide suitable habitat; if an area continues to provide suitable habitat, surveys will be repeated every two years until construction is completed. For all areas in which this species has been documented, LADWP shall develop and implement a monitoring plan that includes the following measures in consultation with the USFWS and USFS. 1) LADWP shall retain an authorized biologist with demonstrated expertise with arroyo toads to monitor all construction activities in occupied arroyo toad habitat and assist LADWP in the implementation of the monitoring program. The résumés of the proposed biologists will be provided to the USFS for concurrence. This biologist will be referred to as the authorized biologist hereafter. The authorized biologist will be present during all activities immediately adjacent to or within habitat that supports populations of arroyo toad. 2) All trash that may attract predators of the arroyo toad will be removed from work sites or completely secured at the end of each work day. Before the onset of any construction activities, LADWP shall meet on-site with staff from the USFS and the authorized biologist. LADWP shall provide information on the general location of	Modified for consistency with the Final Biological Assessment as submitted to USFWS	*Protect arroyo toad and California red-legged frog.* 24a LADWP shall conduct USFWS-approved protocol surveys for arroyo toads and California red-legged frogs at all locations containing suitable habitat near the proposed construction sites within two years before the start of construction. 24b If arroyo toads are detected, further surveys within the area will not be required and the avoidance measures detailed below will be followed. If no arroyo toads are detected, habitat assessments will be performed on a yearly basis to determine if the area continues to provide suitable habitat; if an area continues to provide suitable habitat, surveys will be repeated every two years until construction is completed. For all areas in which this species has been documented, LADWP shall develop and implement a monitoring plan that includes the following measures in consultation with the USFWS and USFS. 1) LADWP shall retain a authorized biologist with demonstrated expertise with arroyo toads to monitor all construction activities in occupied arroyo toad habitat and assist LADWP in the implementation of the monitoring program. The résumés of the proposed biologists will be provided to the USFS for concurrence. This biologist will be referred to as the authorized biologist hereafter. The authorized biologist will be present during all activities immediately adjacent to or within habitat that supports populations of arroyo toad. 2) All trash that may attract predators of the arroyo toad will be removed from work sites or completely secured at the end of each work day. Before the onset of any construction activities, LADWP shall meet on-site with staff from the USFS and the authorized biologist. LADWP shall provide information on the general location of

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	construction activities within habitat of the arroyo toad and the actions taken to reduce impacts to this species. Because arroyo toads may occur in various locations during different seasons of the year, LADWP, USFS, USFWS, and authorized biologists will, at this preliminary meeting, determine the seasons when specific construction activities would have the least adverse effect on arroyo toads. 3) Any arroyo toads found during clearance surveys shall be reported to the USFWS and the USFS immediately. Clearance surveys shall occur on a daily basis in areas that contain suitable habitat. 4) If the authorized biologist determines that Project activities are disturbing the species, they shall notify the construction manager, and the construction manager, in consultation with the biologist, will have the authority to halt all activities until appropriate corrective measures have been completed. 5) To ensure that diseases are not conveyed between work sites by the authorized biologist or his or her assistants, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force will be followed at all times. 6) LADWP will avoid ground disturbing activities (e.g., grading, stream crossing upgrades, parking) along access roads within a 1.0 mi (1.6 km) buffer of occupied stream habitat for arroyo toads during the activity period for arroyo toads (March through November). This date and buffer may be modified based on the existing temperature regime and habitat conditions, with Angeles National Forest approval. 7) LADWP will limit use of the access roads in areas known to support arroyo toad within a 1.0-mile (1.6 km) buffer to daylight hours only during the activity period for arroyo toads (generally March through November). Use of these roadways during rain events will not occur during the activity period for arroyo toads. Vehicle speeds will be limited to 15 mph (24 kph), and no parking or loitering will occur along the access roads. An authorized biologist must permanently remove from within the Project area any individuals of exotic species, such as bullfrogs, crayfish, and centrarchid fishes, to the maximum extent possible and ensure that activities are in compliance with the California Fish and Game Code. 8) No stockpiles of materials will occur in areas occupied by arroyo toads. 9) Any spills of fluids that may be hazardous to aquatic fauna (gasoline, hydraulic fluid, motor oil, etc.) in areas that may contain arroyo toads will be reported to the USFS and USFWS within one hour. 10) For each ac/ha of arroyo toad occupied habitat that is permanently impacted on the Angeles National Forest, five ac/ha of arroyo toad occupied habitat will be conserved in the vicinity of the impacted habitat (i.e., impacts will be offset at a habitat ratio as required by the final Biological Opinion). 24c If California red-legged frogs are detected, further surveys within the area will not be required and the avoidance measures detailed below will be followed. If no California red-legged frogs are detected, habitat assessments will be performed on a yearly basis to determine if the area continues to provide suitable habitat; if an area continues to provide suitable habitat, surveys will be repeated every two years until construction is completed. For all areas in which this species has been documented, LADWP shall develop and implement a monitoring plan that includes the following measures in consultation with the USFWS and USFS. 1) All trash that may attract predators of red-legged frogs will be removed from work sites or completely secured at the end of each work day. 2) Between November 1 and March 31, no work will be authorized within one mile of occupied habitat, and no vehicular crossings at wet fords of those channels will be authorized. The one-mile buffer distance may be reduced based on the topography of the site, with the approval of the USFWS and the USFS. 3) If and as required by USFWS, between April 1 and October 31, no work will be authorized within 0.5 mile of occupied habitat, and no vehicular crossings at wet fords of those channels will be authorized. 4) If and as required by USFWS, from November 1 thru March 31, overflights will be restricted to a minimum altitude of 1,000 feet (305 m) from the stream bottom within 1.0 mile (1.6 km) of a California red-legged frog occupied stream. 5) Before the onset of any construction activities, LADWP shall meet on-site with staff from the USFWS and the USFS-approved biologist (authorized biologist). The authorized biologist shall hold a current red-legged frog permit from USFWS. LADWP shall provide information on the general location of construction activities within habitat of the red-legged frog and the actions taken to reduce impacts to this species. Because red-legged frogs may occur in various locations during different seasons of the year, LADWP, USFWS, USFS, and authorized biologists will, at this preliminary meeting, determine the seasons when specific construction activities would have the least adverse effect on red-legged frogs. 6) Where construction would occur in habitat where red-legged frogs are widely distributed, work areas will be fenced in a manner that prevents equipment and vehicles from straying from the designated work area into adjacent habitat. The authorized biologist will assist in determining the boundaries of the area to be fenced in		construction activities within habitat of the arroyo toad and the actions taken to reduce impacts to this species. Because arroyo toads may occur in various locations during different seasons of the year, LADWP, USFS, and authorized biologists will, at this preliminary meeting, determine the seasons when specific construction activities would have the least adverse effect on arroyo toads. 3) Biological monitors will inspect and monitor construction impact areas daily for species of special concern. If arroyo toads are located, work will not commence until the species has left on its own and USFWS has been contacted. 4) If the authorized biologist determines that Project activities are disturbing the species, they shall notify the construction manager, and the construction manager, in consultation with the authorized biologist, will have the authority to halt all activities until appropriate corrective measures have been completed. 5) To ensure that diseases are not conveyed between work sites by the authorized biologist or his or her assistants, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force will be followed at all times. 6) LADWP will avoid ground disturbing activities (e.g., grading, stream crossing upgrades, parking) along access roads within a 1.0 mi (1.6 km) buffer of occupied stream habitat for arroyo toads during the activity period for arroyo toads (March through November). This date and buffer may be modified based on the existing temperature regime and habitat conditions, with Angeles National Forest approval. 7) LADWP will limit use of the access roads in areas known to support arroyo toad within a 1.0-mile (1.6 km) buffer to daylight hours only during the activity period for arroyo toads (generally March through November). Use of these roadways during rain events will not occur during the activity period for arroyo toads. Vehicle speeds will be limited to 15 mph (24 kph), and no parking or loitering will occur along the access roads. An authorized biologist must permanently remove from within the Project area any individuals of exotic species, such as bullfrogs, crayfish, and centrarchid fishes, to the maximum extent possible and ensure that activities are in compliance with the California Fish and Game Code. 8) No stockpiles of materials will occur in areas occupied by arroyo toads. 9) Any spills of fluids that may be hazardous to aquatic fauna (gasoline, hydraulic fluid, motor oil, etc.) in areas that may contain arroyo toads will be reported to the USFS and USFWS within one hour. 10) The ANF will require each ac/ha of arroyo toad occupied habitat that is permanently impacted on the Angeles National Forest, five ac/ha of arroyo toad occupied habitat will be conserved in the vicinity of the impacted habitat. 24c If California red-legged frogs are detected, further surveys within the area will not be required and the avoidance measures detailed below will be followed. If no California red-legged frogs are detected, habitat assessments will be performed on a yearly basis to determine if the area continues to provide suitable habitat; if an area continues to provide suitable habitat, surveys will be repeated every two years until construction is completed. For all areas in which this species has been documented, LADWP shall develop and implement a monitoring plan that includes the following measures in consultation with the USFWS and USFS. 1) All trash that may attract predators of red-legged frogs will be removed from work sites or completely secured at the end of each work day. 2) Between November 1 and March 31, no work will be authorized within one mile of occupied habitat, and no vehicular crossings at wet fords of those channels will be authorized. The one-mile buffer distance may be reduced based on the topography of the site, with the approval of the USFWS and the USFS. 3) Between April 1 and October 31, no work will be authorized within 0.5 mile of occupied habitat, and no vehicular crossings at wet fords of those channels will be authorized. 4) LADWP shall provide information on the general location of construction activities within habitat of the red-legged frog and the actions taken to reduce impacts to this species. Because red-legged frogs may occur in various locations during different seasons of the year, LADWP, USFS, and authorized biologists will work with USFWS to determine the season when specific construction activities would have the least adverse effect on red-legged frogs. 5) Construction activities that may occur near breeding pools or other areas where large numbers of red-legged frogs may congregate will be conducted during times of the year when individuals have dispersed from these areas (i.e., winter) or the species is dormant, unless otherwise authorized by the USFS and USFWS. The authorized biologist will assist LADWP in scheduling its work activities accordingly. Biological monitors will inspect and monitor construction impact areas daily for species of special concern. If California red-legged frogs are located, work will not commence until the species has left on its own and USFWS has been contacted.

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	consultation with the LADWP and the responsible agency(s). All workers will be advised that equipment and vehicles must remain within the fenced work areas. 7) The authorized biologist will direct the installation of the fence and conduct a minimum of three nocturnal surveys. If red-legged frogs are observed on the final survey or during subsequent checks, the authorized biologist shall halt construction and report to the USFWS and the USFS immediately. 8) Fencing to exclude red-legged frogs will be at least 24 inches in height. 9) Construction activities that may occur near breeding pools or other areas where large numbers of red-legged frogs may congregate will be conducted during times of the year when individuals have dispersed from these areas (i.e., winter) or the species is dormant, unless otherwise authorized by the USFS and USFWS. The authorized biologist will assist LADWP in scheduling its work activities accordingly. 10) Any red-legged frogs found during clearance surveys shall be reported to the USFWS and the USFS immediately. Clearance surveys shall occur on a daily basis in the work area. 11) If the authorized biologist determines that Project activities are disturbing the species, they shall notify the construction manager, and the construction manager, in consultation with the biologist, will have the authority to halt all activities until appropriate corrective measures have been completed. 12) LADWP shall avoid nighttime activities when red-legged frogs may be present on the access road. Traffic speed should be maintained at 15 mph or less in the work area. 13) An authorized biologist must permanently remove from within the Project area any individuals of exotic species, such as bullfrogs, crayfish, and centrarchid fishes, to the maximum extent possible, and ensure that activities are in compliance with the California Fish and Game Code. 14) No stockpiles of materials will occur in areas occupied by California red-legged frogs. 15) To ensure that diseases are not conveyed between work sites by the authorized biologist or his or her assistants, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force will be followed at all times. 16) Any spills of fluids that may be hazardous to aquatic fauna (gasoline, hydraulic fluid, motor oil, etc.) in areas that may contain California red-legged frogs will be reported to the USFS and the USFWS within one hour.		6) If the authorized biologist determines that Project activities are disturbing the species, they shall notify the construction manager, and the construction manager, in consultation with the authorized biologist, will have the authority to halt all activities until appropriate corrective measures have been completed. 7) LADWP shall avoid nighttime activities when red-legged frogs may be present on the access road. Traffic speed should be maintained at 15 mph or less in the work area. 8) A authorized biologist must permanently remove from within the Project area any individuals of exotic species, such as bullfrogs, crayfish, and centrarchid fishes, to the maximum extent possible, and ensure that activities are in compliance with the California Fish and Game Code. 9) No stockpiles of materials will occur in areas occupied by California red-legged frogs. 10) To ensure that diseases are not conveyed between work sites by the authorized biologist or his or her assistants, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force will be followed at all times. 11) Any spills of fluids that may be hazardous to aquatic fauna (gasoline, hydraulic fluid, motor oil, etc.) in areas that may contain California red-legged frogs will be reported to the USFS and the USFWS within one hour.
Earth Resources			
GEO-1	Foundations for towers and other structures shall be sited a safe distance from the known surface traces of all active faults.	Yes	
GEO-2	No structures shall be constructed within the boundaries of identified landslides where the slide material has a mean depth greater than two feet unless design techniques are implemented to reduce potential landslide hazard. Techniques could include excavating potentially unstable material resulting in a flatter more stable slope configuration; reduction of landslide driving forces by removal of earth materials at the top of the landslide; construction of buttress and/or stabilization fills; construction of retaining walls, installation of rock bolts on the face of the slope, or installation of protective wire mesh on the slope face; and/or the construction of debris impact walls at the toe of the slope to contain rock fall debris. If switching stations construction within identified debris flow deposit boundaries is unavoidable, the debris flow deposit(s) shall be excavated down to bedrock beneath and upslope of the switching station, or the foundation shall be anchored in bedrock.	Yes	
PR-1	A qualified paleontologist/principal investigator shall be retained by LADWP to develop and implement a paleontological resource mitigation plan (PMTP). A qualified paleontologist is defined as an individual with a MS or Ph.D. in paleontology or geology who is experienced with paleontological procedures and techniques, who is knowledgeable in the geology and paleontology of the Project area, and who has worked as a paleontological mitigation project supervisor for at least one year. The qualified paleontologist shall attend relevant pre-construction meetings to consult with grading and excavation contractors concerning excavation schedules, paleontological field techniques, and safety issues. The PMTP shall be based on Society of Vertebrate Paleontology guidelines and meet all regulatory requirements. The PMTP shall identify construction impact areas of major/undetermined to maximum sensitivity for encountering significant resources and the depths at which those resources are likely to be encountered. Preconstruction surveys of these areas shall be conducted before commencement of construction activities. The PMTP shall outline a coordination strategy to ensure that a qualified paleontological monitor will conduct full-time monitoring of all ground disturbance in sedimentary rocks determined to have a major/undetermined to maximum sensitivity. Sedimentary rocks of low, marginal, and undetermined sensitivity shall be monitored on a part-time basis (as determined by the qualified paleontologist). Geologic rock units with zero sensitivity will not require paleontological monitoring. The PMTP shall detail the significance criteria to be used to determine which resources will be avoided or	Yes	

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	recovered for their data potential. The PMTP shall also detail methods of recovery, preparation and analysis of specimens, final curation of specimens at a federally accredited repository, data analysis, and reporting. The PMTP shall specify that all paleontological work undertaken by LADWP on public land shall be carried out by qualified paleontologists with the appropriate current permits, including, but not limited to a Paleontological Resources Use Permit (for work on public lands administered by BLM). Notices to proceed will be issued by the BLM, USFS, and other agencies with jurisdiction, following approval of the PMTP.		
PR-2	A paleontological monitor shall be retained on a full-time basis to monitor Project-related construction excavations (e.g., road grading, switching station mass grading, and tower footing boreholes and pad construction) in areas underlain by paleontological resources of maximum and major sensitivity. Project-related construction excavations in areas underlain by paleontological resources of undetermined sensitivity shall be monitored on a part-time basis, while Project-related construction excavations in areas underlain by paleontological resources of minor or zero sensitivity will not require any monitoring. A qualified paleontological monitor shall have a B.S. in geology or paleontology and have at least one year experience in the collection and salvage of fossil materials. The paleontological monitor shall work under the direction of the qualified paleontologist.	Yes	
PR-4	When fossils are discovered, the qualified paleontologist (or paleontological monitor) shall recover them. In most cases fossil salvage activities can be completed in a short period of time. However, some fossil specimens (such as a complete large mammal skeleton) may require an extended salvage period. In these instances the paleontologist shall be allowed to temporarily direct, divert, or halt earthwork to allow recovery of fossil remains in a timely manner. At each fossil discovery site, field data forms shall be prepared to document the geographic, geologic, stratigraphic, and taphonomic aspects of the discovery. Because of the potential for the recovering of small fossil remains, such as isolated mammal teeth, as determined by a qualified paleontologist, it may be necessary to collect bulk samples (up to 6,000 pounds) of sedimentary rock matrix. This bulk matrix sample shall then be tested by screenwashing a 200-pound subsample to determine the presence and relative abundance of identifiable microfossils. If positive results are obtained, the entire sample shall be screenwashed.	Yes	
PR-5	To the extent feasible, fossil remains collected during monitoring and salvage shall be cleaned, repaired, sorted, and cataloged as part of the mitigation program. Prepared fossils, along with copies of all pertinent field notes, photos, and maps, shall be deposited in a federally accredited repository for both vertebrate and invertebrate fossils such as the Natural History Museum of Los Angeles County or the Museum of Paleontology at the University of California, Berkeley. Funds for curation will be the responsibility of LADWP. The Project qualified paleontologist shall be authorized to submit fossils with accompanying deeds of gift for curation on behalf of LADWP. Donation of the fossils shall be accompanied by financial support for initial specimen storage (costs vary for individual institutions). A final summary report shall be completed that outlines the results of the mitigation program. This report shall include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of recovered fossils.	Yes	
Water Resources			
HYD-1	For Project construction and operation, off-road or cross-country access routes shall be preferred, as feasible, over the construction of new access roads. Such access roads would be approved in advance by the Environmental Monitor and the Project Manager and be flagged with easily seen markers. Any new access roads shall be constructed by mowing or crushing, rather than blading, wherever possible. Mowing for temporary or permanent access roads shall be limited to a 12 foot wide area on straight portions of the road (slightly wider on turns), and the mowing height shall be no less than 4 inches from finished grade. Existing crossings shall be utilized at perennial streams, wetlands, and irrigation channels to the extent feasible. New access roads not required for ongoing maintenance shall be permanently closed after construction using the most effective and least environmentally damaging methods appropriate to that specific area, with concurrence of the landowner or land manager (e.g., stockpiling and replacing topsoil, or rock replacement).	Yes	
HYD-2	Roads would be built as near as possible to right angles to the streams and washes, if feasible. Culverts would be installed where necessary. All construction and maintenance activities shall be conducted in a manner that would minimize disturbance to vegetation, drainage channels, and intermittent or perennial stream banks. In addition, road construction would include dust-control measures during construction in sensitive areas. All existing roads would be left in a condition equal to or better than their condition before the construction of the transmission line.	Yes	

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HYD-3	New impervious areas associated with temporary construction would be restored to existing conditions, including but not limited to revegetation, to the extent possible after completion of Project construction.	Yes	
HYD-5	Structures and new access roads placed within a 100-year floodplain would be engineered so that they do not impede or redirect flood flows or raise the flood elevation.	Yes	
HYD-6	Structures within the 100-year floodplain of rivers and streams would be designed to minimize the capture of flood debris to prevent flow obstructions and scouring during flood flows.	Yes	